PARTS LIST
LISTE PIECES DETACHEES
ERSATZTEILLISTE
LISTA PARTI DI RICAMBIO
LISTA DE PIEZAS DE REPUESTO

SABA
M5518C
Chassis ICC17

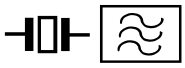
MODULES

MAIN	**IC17F683015032**		
KDB	**KDB1706**	**R**	**25388640**

GK01	TSOP1333		25358570
IB01	TDA6107Q		10533940
IF01	TDA8351		20753830
IP20	TS3702CD FLAT		10537330
IP50	TLP621 GR(D4-LF2 T)	⚠	20827900
IP61	TL431ACZ		10538830
IP87	MC7812/CT		46007600
IP95	TDA8139		10044580
IR01	ST92R195 CUT2.2 JAL FLAT		10592030
IR02	OTP C17 V3.00-0 EU		25414350
IR03	M24C16MN6 FLAT		25348520
IS40	MSP3405D-PP		10615110
IS80	TDA7269		10348790
IV01	TDA8855H FLAT		10533960
ZL11	MP25	⚠	10500150
ZL13,14	MP63	⚠	10472270

TB01,**TP**21	BF423	16003110
TB02	BF422	16003090
TF01,**TI**60, **TL**31,**TP**58,59, 67,71,76,90, **TR**60,**TS**01,81, **TV**10	BC847B SMD	11070770
TI10	DTC144EK SMD	16007030
TL14	2SC2236Y	16000220
TL32	BC337-40	45001466
TL33	MPS750	16001340
TL34,**TP**50	S2000N	20578720
TL41	BD241C	16001880
TL42	BC546B	45001866
TL71	BC847C SMD	90618810
TL72	RN1401 SMD	10966100
TP42,57,75,82	BCR191 SMD	16006910
TP44	2SA1020Y	16003740
TP72,**TR**20	DTC113ZK SMD	10550750
TP86,**TR**15	BC857B SMD	30946660
TR13,23,40	BCR141 SMD	16006890
TX15	BC547B	16000890

DB04,**DP**16,17, 18,19	1N4004	44009009
DB05	1.5KE250A	25353360
DB30,31,50,51, 70,71,**DL**31	BAV21	44044407
DE01	BZX55C2V7	80444120
DH01	BZX55B33	80442730
DH04,**DL**12,72, 74,75,**DP**53, **DR**20,23,**DV**19	1N4148	44009209
DK01,**DL**09, **DP**72	BZX55C5V1/ZPD5V1	80444140
DL11,24,25,41, **DP**41,46,47,48	RGP10G	10459090
DL13	MUR420	16009630
DL14	RGP15G	10272800
DL19,73,77, **DP**24,40,42,52, 54,56,57,58, 60,61,62,63, 67,70,85,89, **DR**21,22,24, **DV**09	LL4148 SMD	16012450
DL21	BY228	16008370
DL22,**DP**80	BYW76	16009120
DL42	ZMM5,1 SMD	70446740
DL71	BZX55C20	30948810
DP01,02,03,04	BYW27-1000	10455390
DP06	BZW04-342	25354340
DP20	ZPD51/BZX55C51/BZX79C51	90578110
DP21	BZX85C39	80444000
DP22	BZX55B5V6/ZPD5V6 2%	70438200
DP43,45,50,87	RGP02-20	10472330
DP44	BZX55C3V9	80444130
DP59	BZX55C18	11073680
DP82	RGP10M	10455320
DP83	BAT42	16007410
DP84,93	MUR120	10564670
DP94	BZX55C13	70438310
DR05	LL42 SMD	16012530
DS90	BZX55C3V6	50890640
GE01	TLUV5300 LED	11137650



FI10	OFWG3970M FOS	10512420
FI20	OFWK9354M FOS	10354110
FI50	5M74HZ	20338170
QC01	4M433619HZ	10087710
QC02	3M579545HZ	10542190
QR01	4M0HZ	10254300
QS40	18M432HZ	10334670

FI01	40M4HZ	20300950
FI02	31M9HZ	10552630
FI30	77M8HZ	10559760
LL22		10636390

PP64	1K0 OHM	70434550

RB01,04	1K5 OHM 5% 0,50W		10121880
RB06	220R0 OHM 5% 0,25W	⚠	15009810
RB13	10R0 OHM 10% 0,50W		15000160
RB31,51,71	560R0 OHM 10% 0,50W		10257590
RC02	1R0 OHM 5% 0,40W	⚠	13060910
RF05	1R5 OHM 1% 0,70W		10451140
RL07	6K19 OHM 1% 0,40W		15020490
RL13	0R47 OHM 5% 2,5W		10537750
RL26	1K0 OHM 10% 0,50W		10393870
RL36	2R2 OHM 5% 0,25W	⚠	15009870
RL43	68K1 OHM 1% 0,70W		10147740
RL44	1R0 OHM 5% 0,50W	⚠	10576360
RP04	2R7 OHM 5% 4,50W		10379110
RP15	18R0 OHM 220V PTC	⚠	41398800
RP49	0R47 OHM 5% 2,5W	⚠	25339900
RP50	10M0 OHM 5% 0,70W	⚠	10074320
RP63	432K0 OHM 1% 0,25W		15017950
RS12	18R0 OHM 5% 0,30W	⚠	15009660
RS87,88	4R7 OHM 5% 0,25W	⚠	35032200
RV20	33K2 OHM 1% 0,25W		15016530
RX17	10R0 OHM 5% 0,25W	⚠	15009580

R : RECYCLED PART
: PIECE RECYCLEE
: AUSTAUSCHTEILE
: RICAMBIO RICICLATO
: MODULO REPROCESADO

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Für weitere Auskünfte, wenden Sie sich bitte an die THOMSON multimedia Kundendienste
Per precisazioni, contattare l'assistenza tecnica THOMSON multimedia
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CB01	10N0F 3K0V		14036450
CB04	47N0F 5% 400V		25349330
CL12,15,**CP**18, 21,42,85,94	330P0F 20% 1K0V		14035270
CL22	30N0F 5% 1K0V	⚠	10576730
CL24	440N0F 5% 400V	⚠	10569610
CL48	10N0F 10% 100V		70427750
CP01	100N0F 20% 275V	⚠	10331520
CP03,04	4N7F 1K0V		10058740
CP05	1N5F 10% 1K0V		20338740
CP10	100U0F 385V		30662900
CP11	10N0F 10% 400V		15001080
CP16,17	470N0F 20% 275V	⚠	10596570
CP20	220P0F 10% 400V		14033000
CP49	3N3F 20% 1K6V		10607950
CP50	1N0F 20% 400V	⚠	43106800
CP51	150P0F 20% 400V	⚠	20738090
CP81	1N0F 10% 500V		10546570
CP83	100P0F 20% 1K0V		14035280
CP84	1000U0F 20% 35V		43422500

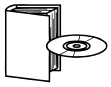
LL05	DSTL28FBC3	⚠	10615260
LL26		⚠	10010530
LL32	DRIVER		10518110
LP01		⚠	10261530
LP20	DRIVER	⚠	10554410
LP44	DRIVER		10570570
LP50	SMT41	⚠	10615920

OTHER PARTS
AUTRES PIECES
SONSTIGE TEILE
ALTRE PARTI
OTRAS PIEZAS

BB05	CATHODE RAY TUBE SOCKET SUPPORT TUBE CATHODIQUE BILDROEHRENFASSUNG SUPPORTO TUBO CATODICO SOPORTE T.R.C	⚠	80298800
BQ12	JACK SOCKET PRISE JACK BUCHSE PRESA JACK TOMA JACK		10539510
BX01,02	SCART SOCKET PRISE PERITEL EURO-AV-BUCHSE EUROPRESA NORMALIZZATA EUROCONECTOR		90617260
CH200	ON/OFF SWITCH CONTACTEUR MARCHE/ARRET EIN-AUS SCHALTER CONTATTORE ACCESO/SPENTO CONTACTOR MARCHA/PARADA	⚠	10276500
FP01	2A5T TIME-LAG FUSE 2A5T FUSIBLE TEMPORISE 2A5T SICHERUNG 2A5T FUSIBILE TEMPORIZZATO 2A5T FUSIBLE TEMPORIZADO	⚠	10246750
NH01	CTT5010 UHF/VHF TUNER CTT5010 TETE UHF/VHF CTT5010 UHF/VHF TUNER CTT5010 TUNER UHF/VHF CTT5010 SINTONIZADOR UHF/VHF	R	20812280
SK01,02,03,04	MICROSWITCH MICRO CONTACTEUR MIKROSCHALTER MICROINTERRUTTORE MICROCONTACTOR		30011100

EQUIPMENT/PRESENTATION
EQUIPEMENT/PRESENTATION
AUSSTATTUNG/GEHAEUSE
PARTI VARIE
EQUIPO/PRESENTACION

POWER SUPPLY LEAD CORDON D'ALIMENTATION NETZKABEL CAVO DI ALIMENTAZIONE CABLE DE ALIMENTACION		⚠	2040063A
FRONT PANEL FACADE FRONTPLATTE PANNELLO FRONTALE PANEL FRONTAL			25322240
REAR PANEL DOS RUECKWAND PANNELLO POSTERIORE TAPA POSTERIOR		⚠	25315240
LOGO SABA LOGO SABA SCHRIFTZUG SABA MARCHIO SABA LOGOTIPO SABA			25295070
CHASSIS SUPPORT SUPPORT CHASSIS CHASSIS HALTER SUPPORTO CHASSIS SOPORTE CHASSIS			25297670
8R OHM 15W LOUDSPEAKER 50X90 8R OHM 15W HAUT PARLEUR 50X90 8R OHM 15W LAUTSPRECHER 50X90 8R OHM 15W ALTOPARLANTE 50X90 8R OHM 15W ALTAVOZ 50X90			10316870
ON/OFF BUTTON TOUCHE MARCHE/ARRET EIN-AUS TASTE TASTO ACCESO/SPENTO TECLA MARCHA/PARADA			25318730
BUTTON ASSY ENSEMBLE DE TOUCHES TASTENEINHEIT ASSIEME TASTI CONJUNTO DE TECLAS			25312630
A51EBV13X01 CATHODE RAY TUBE A51EBV13X01 TUBE CATHODIQUE A51EBV13X01 FARBBILDROEHRE A51EBV13X01 TUBO CATODICO A51EBV13X01 T.R.C		⚠	10318920
DEGAUSSING COIL BOBINE DE DEMAGNETISATION ENTMAGNETISIERUNGSSPULE BOBINA DI SMAGNETIZZAZIONE BOBINA DE DESIMANTACION		⚠	47320195
TC100 REMOTE CONTROL TC100 TELECOMMANDE TC100 FERNBEDIENUNG TC100 TELECOMANDO TC100 TELEMANDO			20879570
FOLDING BOX EMBALLAGE CARTON KARTON IMBALLAGGIO CARTONE EMBALAJE CARTON			25340700
FITTING DOWNER CALE INFERIEURE POLSTER UNTEN DISTANZIATORE INFERIORE CALZO INFERIOR			25312530
FITTING UPPER CALE SUPERIEURE POLSTER OBEN DISTANZIATORE SUPERIORE CALZO SUPERIOR			25312510



M5518C PARTS LIST M5518C LISTE DE PIECES DETACHEES M5518C ERSATZTEILLISTE M5518C LISTA PARTI DI RICAMBIO M5518C LISTA DE PIEZAS DE REPUESTO	35083750
CDROM ICC17 CDROM ICC17 CDROM ICC17 CDROM ICC17 CDROM ICC17	35065140
ICC17 SERVICE MANUAL EUROPE ICC17 DOC TECHNIQUE EUROPE ICC17 TECHNISCHE DOKUMENTATION EUROPE ICC17 DOCUMENTAZIONE TECNICA EUROPE ICC17 DOCUMENTACION TECNICA EUROPE	35063330
M5518C UM THOMSON D/F/I/GB/GR M5518C NU THOMSON D/F/I/GB/GR M5518C BA THOMSON D/F/I/GB/GR M5518C IU THOMSON D/F/I/GB/GR M5518C IU THOMSON D/F/I/GB/GR	25390190

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MEASUREMENT CONDITIONS - CONDITIONS DE MESURES - MESSBEDINGUNGEN CONDIZIONI DI MISURA - CONDICIONES DE MEDIDAS

RECEIVER :
Bar test pattern : PAL, I standard, 100% white.

- On UHF, input level 1 mV
- Via the scart socket, input level 1 Vpp

Colour, contrast and brightness at mid-position, sound at minimum.
Programme selected : PR 01.
DC voltages measured between the point and earth using a digital voltmeter.

RECEPTEUR :
Mire de barres : SECAM, Norm L, Blanc 100%.

- En UHF, niveau d'entrée 1 mV
- Par la prise Péritélévision, niveau d'entrée 1Vcc.

Couleur, contraste, lumière à mi-course, son minimum.
Programme affecté PR 01.
Tensions continues relevées par rapport à la masse avec un voltmètre numérique.

EMPFÄNGER :
Farbbalken : PAL, Norm G, Weiss 100%

- Bei UHF Eingangspegel 1 mV.
- Über die Scartbuchse : Eingangspegel 1 Vss.

Farbe, Kontrast, Helligkeit in der Mitte des Bereichs, Ton auf Minimum.
Zugeordnetes Programm PR 01.
Gleichspannungen mit einem digitalen Voltmeter zur Masse gemessen.

RICEVITORE :
Monoscopio per barre : PAL, norma G. bianco 100%.

- In UHF, livello d'entrata 1 mV,
- Per la presa SCART, livello d'entrata 1 Vcc.

Colore, Contrasto, Luce a metä corsa, Suono minimo.
Programma designato PR 01.
Tensioni continue rilevate rispetto alla massa con un voltametro numerico.

RECEPTOR :
Mira de barras : PAL, norma G, blanco 100%.

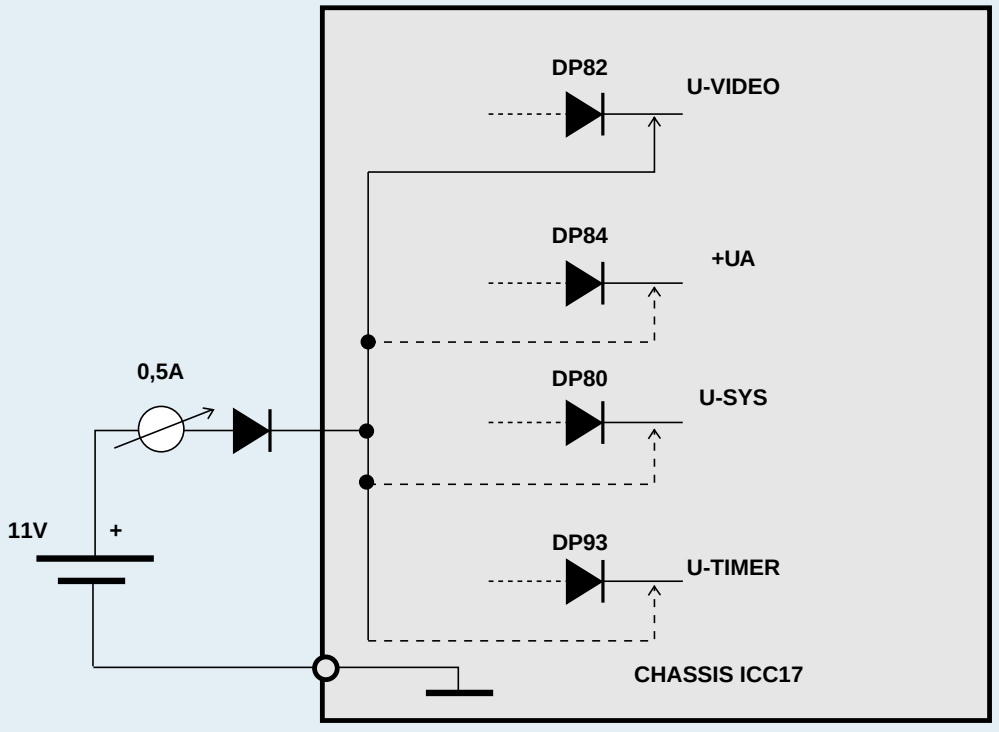
- En UHF, nivel de entrada 1 mV,
- Por la toma Peritelevision, nivel de entrada 1 Vpp.

Color, Contraste, luz a mitad de carrera, Sonido minimo.
Programa afectado PR 01.
Tensiones continuas marcadas en relacion a la masa con un voltimetro digital.

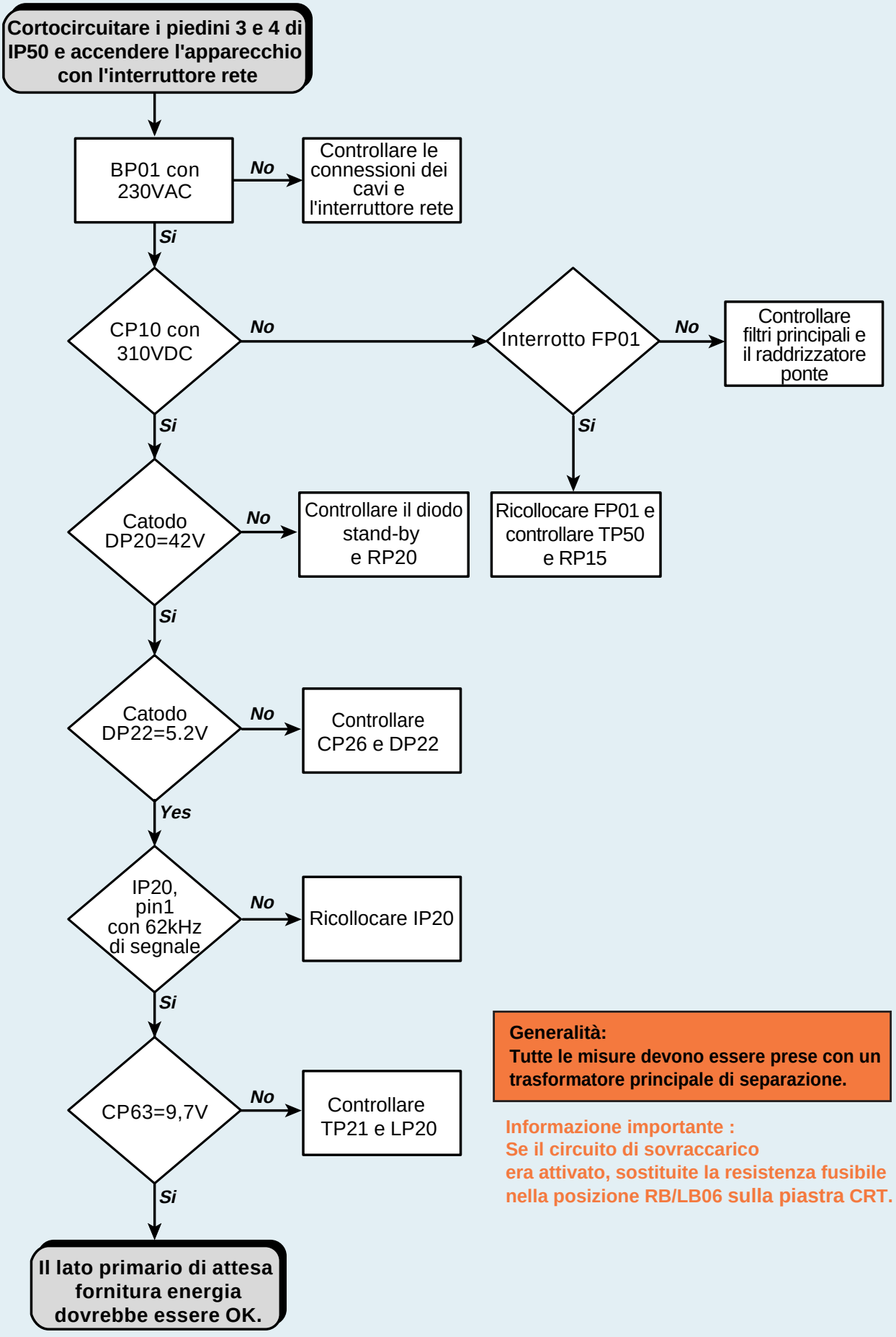
VOLTAGGI DC SECONDARI

Tutte le misurazioni in questo capitolo dovrebbero essere fatte SENZA i voltaggi principali.

Test del circuito:
il voltaggio esterno è una fornitura d'energia esterna DC con un voltaggio regolato di 11V e una limitazione di corrente a 0,5A.
Il polo della fornitura del voltaggio esterno deve essere direttamente connesso al campo secondario del telaio.
Il polo + della fornitura del voltaggio esterno fornisce il carico tramite un diodo.
L'anodo di questo diodo è connesso al polo +, il catodo è connesso al carico sul telaio. La corrente deve essere misurata.



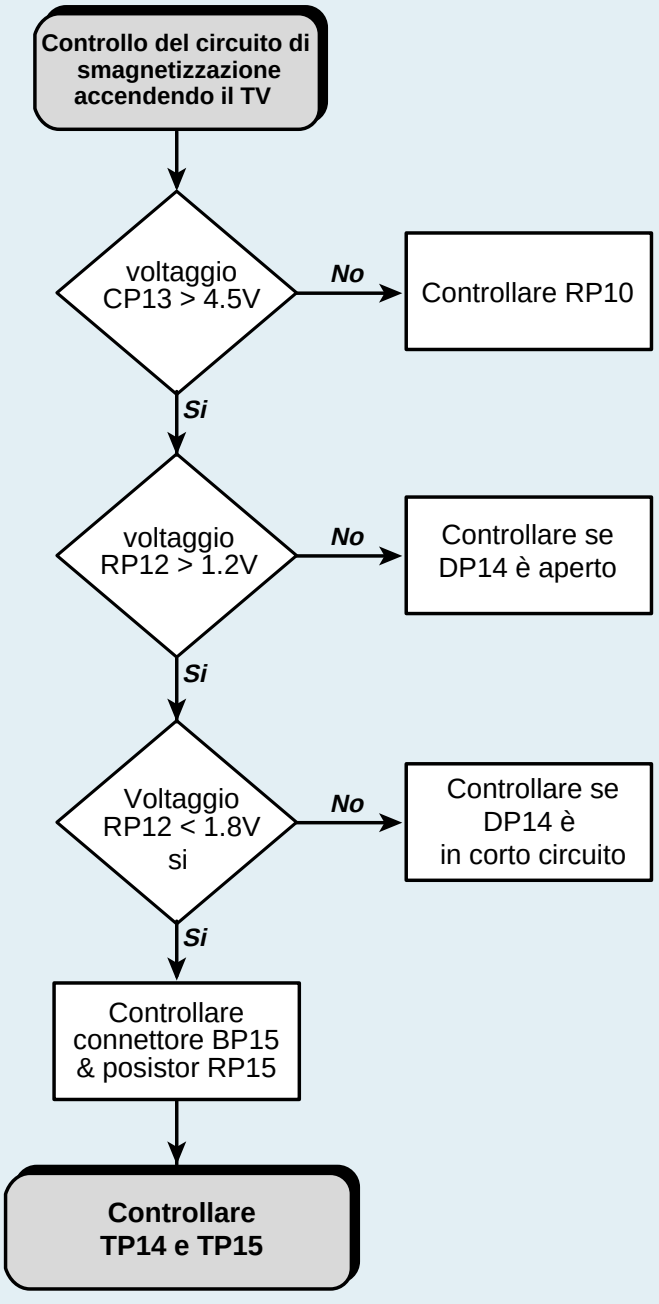
ALIMENTAZIONE STAND-BY – LATO PRIMARIO



Generalità:
Tutte le misure devono essere prese con un trasformatore principale di separazione.

Informazione importante :
Se il circuito di sovraccarico era attivato, sostituite la resistenza fusibile nella posizione RB/LB06 sulla piastra CRT.

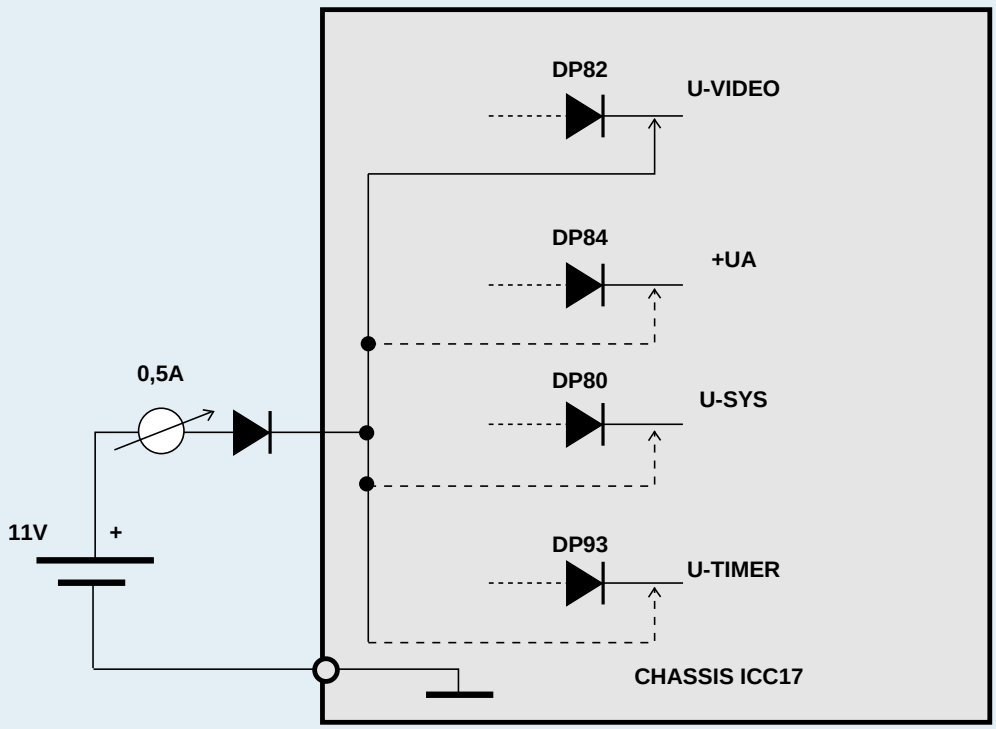
CIRCUITO DI SMAGNETIZZAZIONE



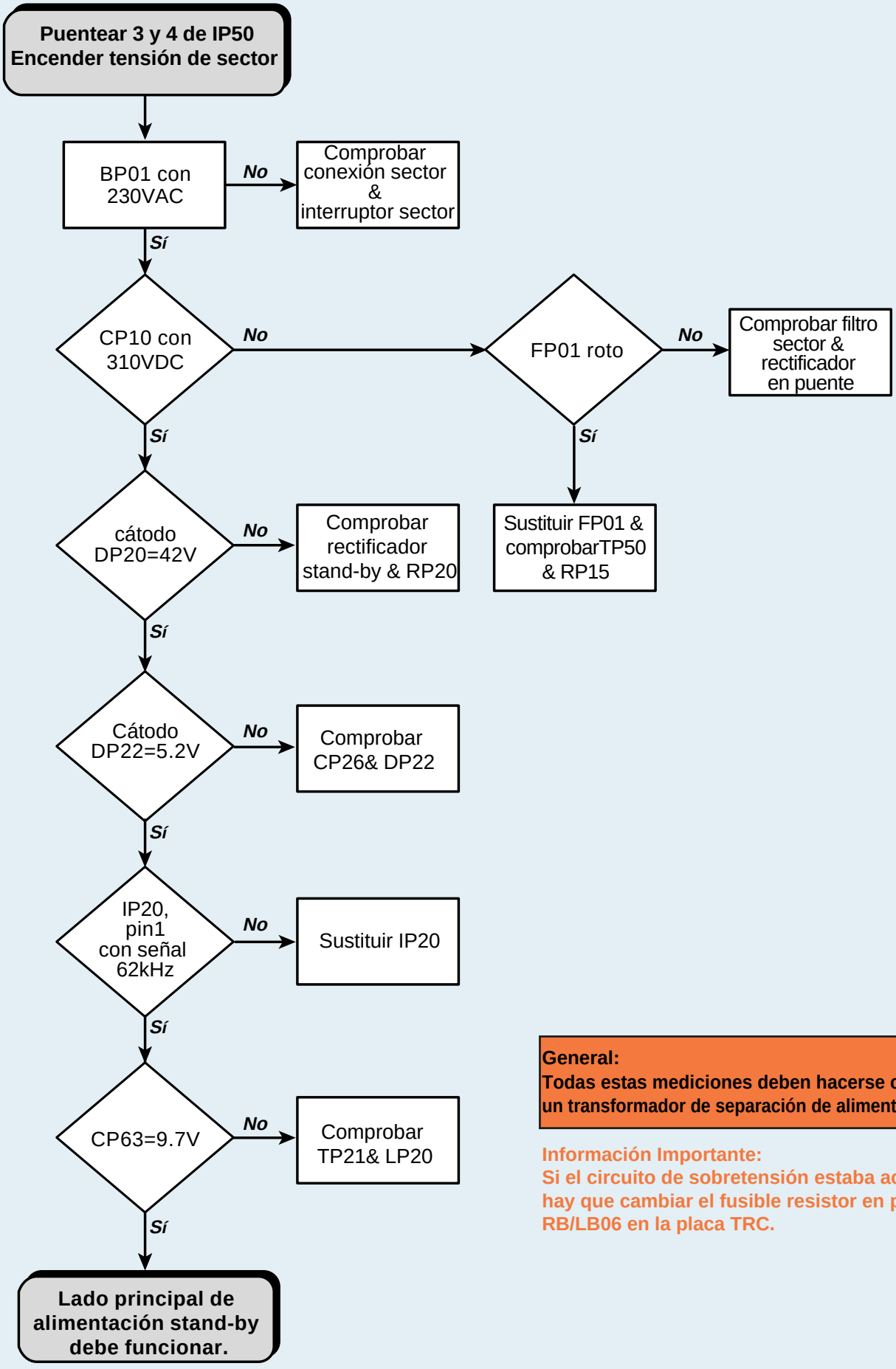
VOLTAJES DC SECUNDARIOS

Todas las mediciones en este capítulo deberán hacerse SIN tensión de sector.

Test circuito:
El voltaje externo es una alimentación DC externa con un voltaje ajustado de 11V y una limitación de corriente de 0.5A. El polo de la alimentación del voltaje externo debe estar directamente conectado a toma de tierra secundaria del chasis.
El polo+ de la alimentación del voltaje externo alimenta la carga a través de un diodo.
El ánodo del diodo está conectado al polo+, el cátodo de este diodo está conectado a la carga en el chasis. La corriente debe ser medida.



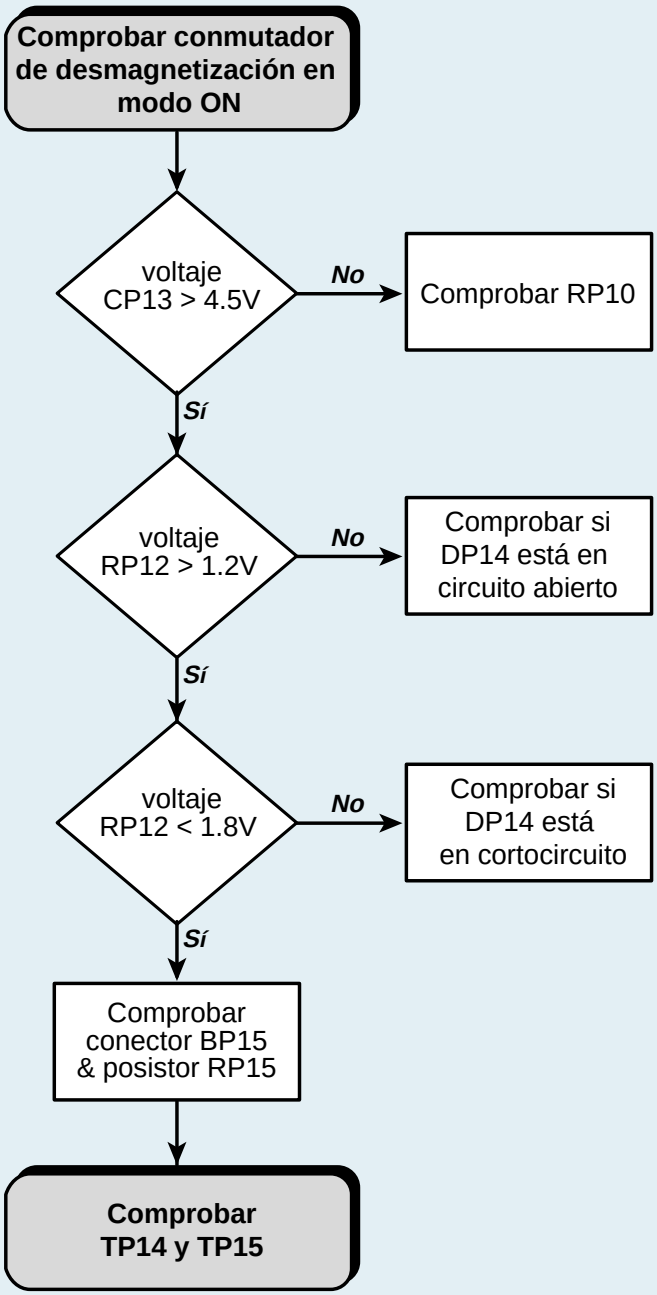
ALIMENTACION STAND BY – LADO PRINCIPAL



General:
Todas estas mediciones deben hacerse con un transformador de separación de alimentación.

Información Importante:
Si el circuito de sobretensión estaba activado, hay que cambiar el fusible resistor en posición RB/LB06 en la placa TRC.

CIRCUITO DE DESMAGNETIZACION

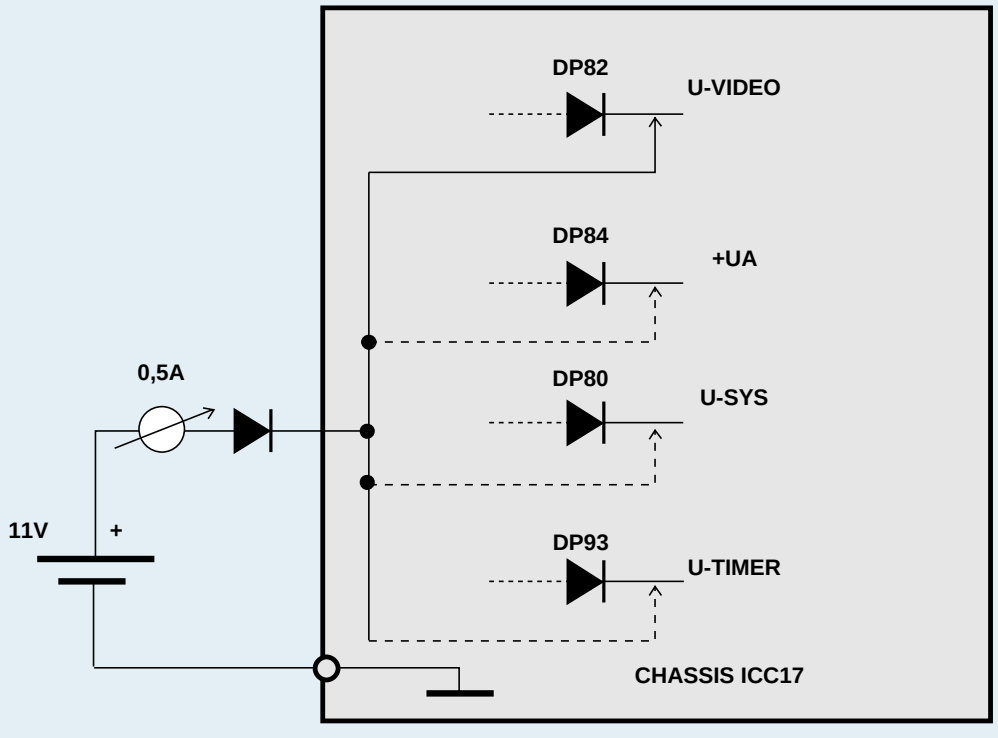


SECONDARY DC-VOLTAGES

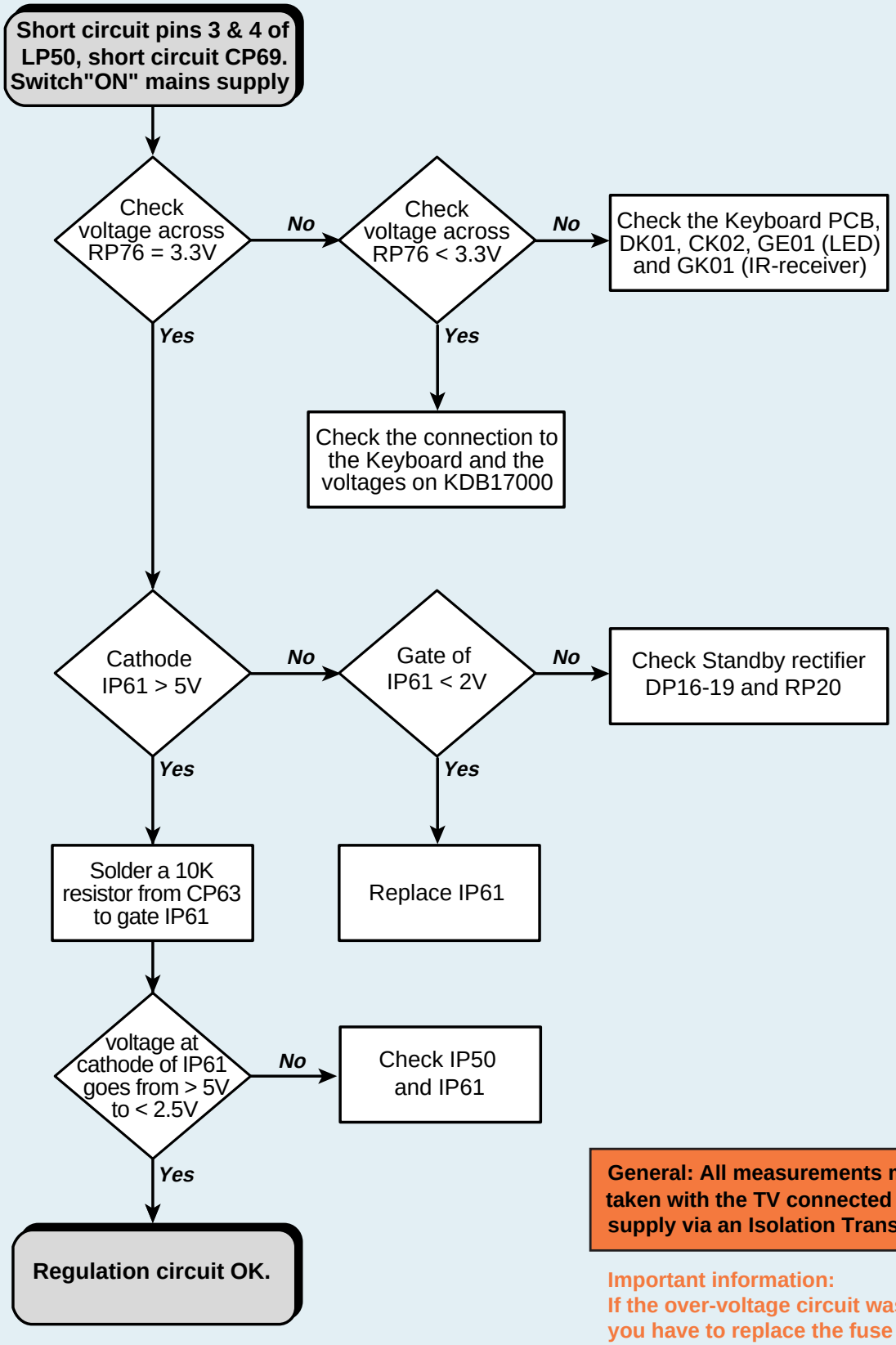
All measurements in this chapter must be done WITHOUT the mains supply connected to the TV.

Test circuit:

The external voltage source is provided by a variable DC-power supply with its output voltage set to 11V and the current limitation set to 500mA's. The negative terminal of the DC-power supply must be directly connected to the chassis secondary ground plane. The positive terminal of the DC-power supply is first connected to an ammeter and then the anode of an isolation diode. The cathode of the isolation diode is then connected to the load on the chassis as shown below. Measure the current drawn by each load tested.



STANDBY POWER SUPPLY - SECONDARY SIDE

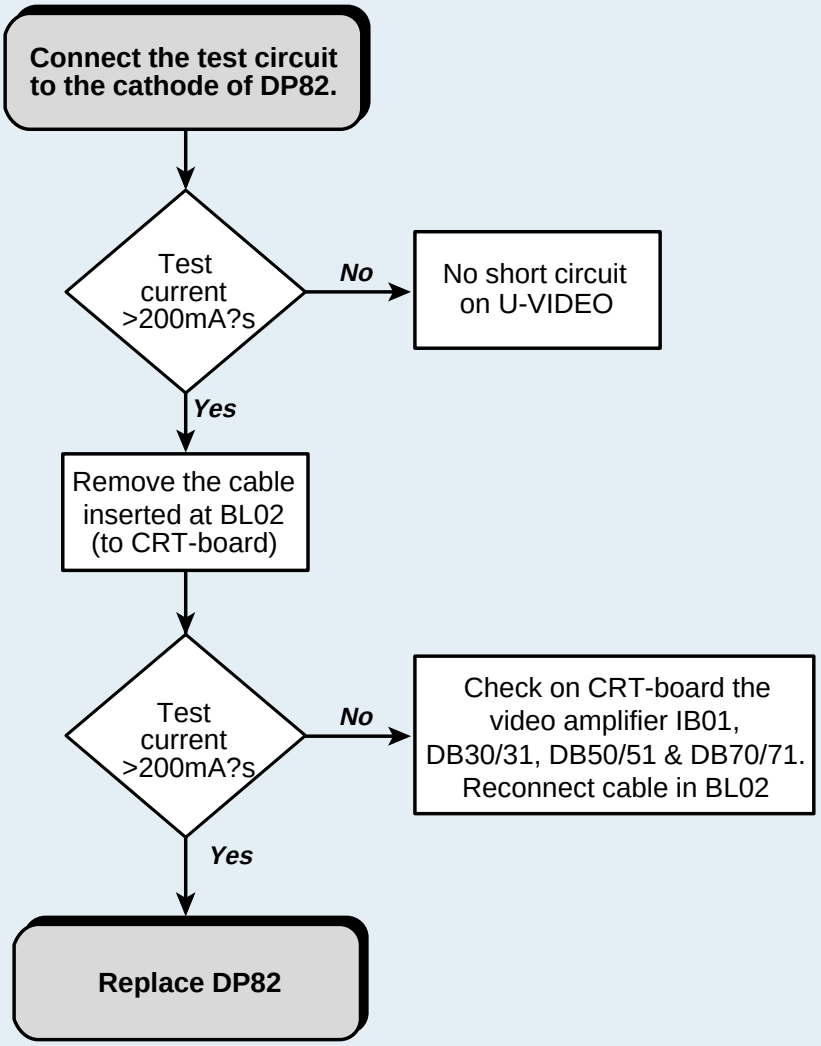


General: All measurements must be taken with the TV connected to the mains supply via an Isolation Transformer.

Important information:
If the over-voltage circuit was activated, you have to replace the fuse resistor at location RB/LB06 on the CRT-board.

After finishing this test, please remove the short circuits from pins 3/4 of LP50 and CP69 also remove the 10k resistor.

POWER SUPPLY - SECONDARY SIDE : U-VIDEO

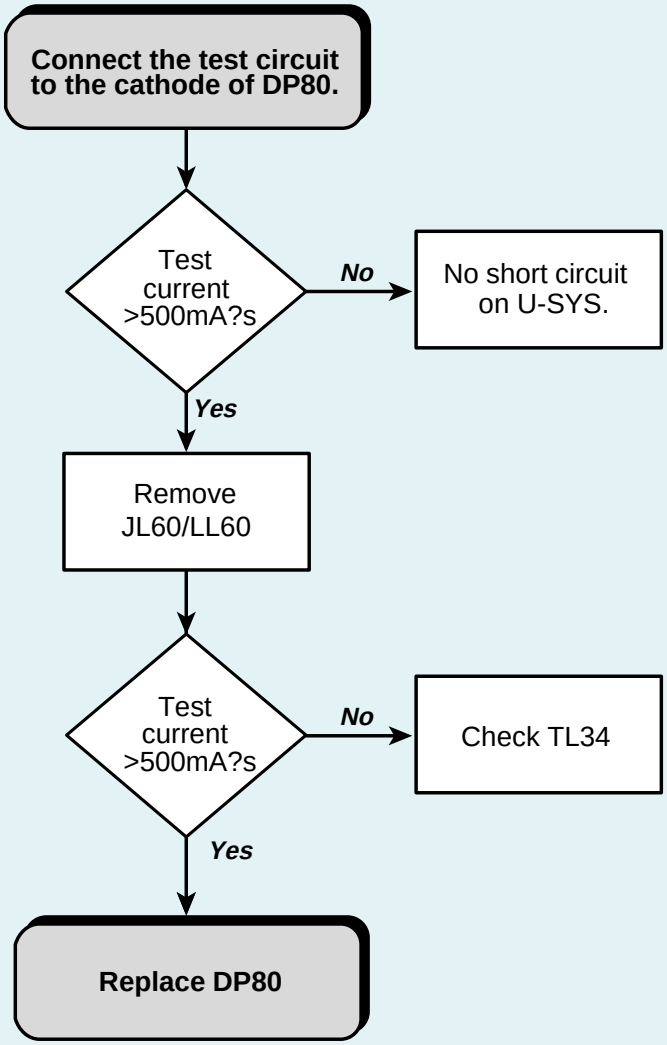

Connect the test circuit to the cathode of DP82.
Test current >200mA?s
No
No short circuit on U-VIDEO
Yes
Remove the cable inserted at BL02 (to CRT-board)
Test current >200mA?s
No
Check on CRT-board the video amplifier IB01, DB30/31, DB50/51 & DB70/71. Reconnect cable in BL02
Yes
Replace DP82

After finishing this test, please replace cable BL02 and remove the test circuit.

General: All measurements must be taken with the TV connected to the mains supply via an Isolation Transformer.

Important information:
If the over-voltage circuit was activated, you have to replace the fuse resistor at location RB/LB06 on the CRT-board.

POWER SUPPLY - SECONDARY SIDE : U-SYS

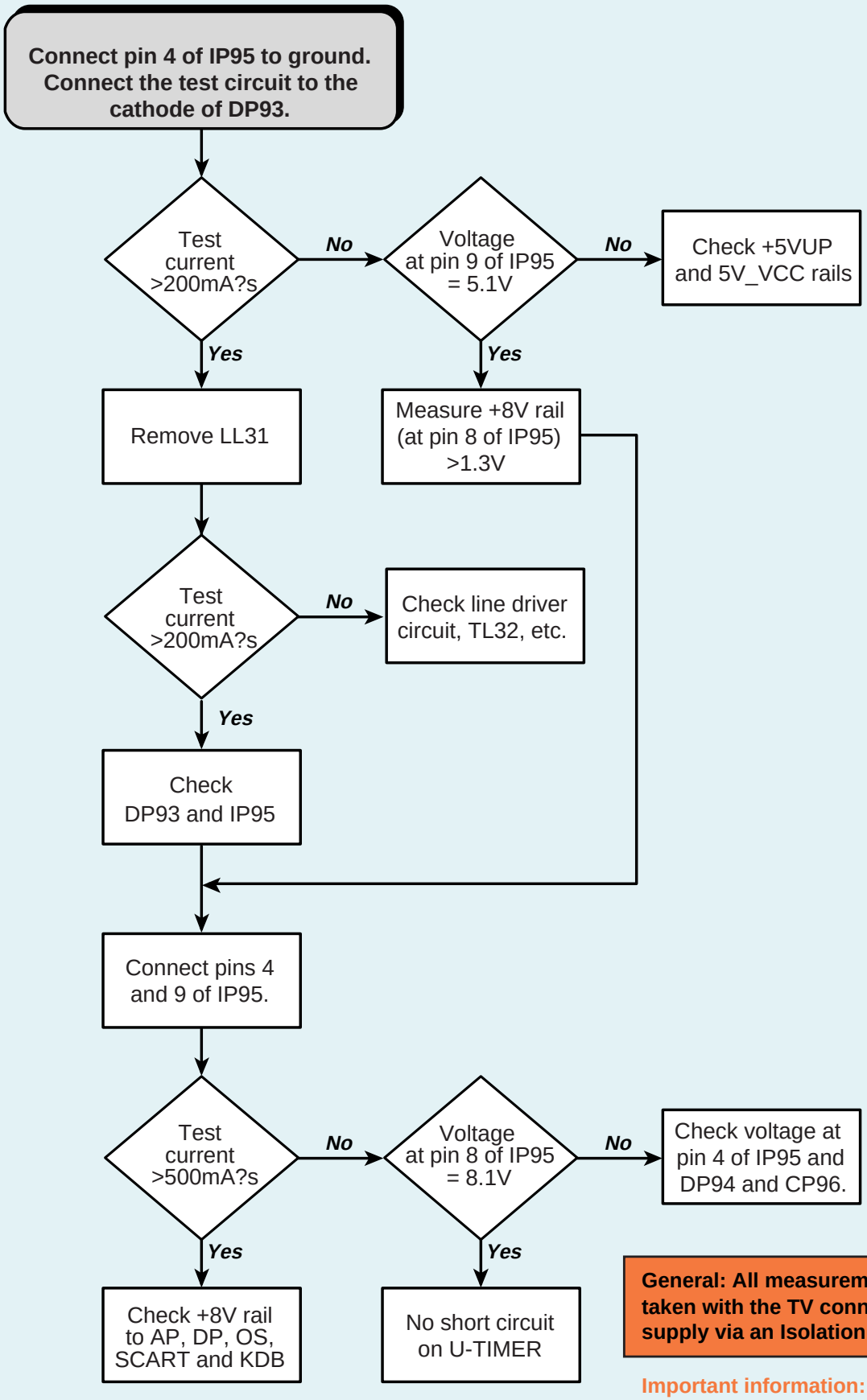


After finishing this test, please replace JL60/LL60 and remove the test circuit.

General: All measurements must be taken with the TV connected to the mains supply via an Isolation Transformer.

Important information:
If the over-voltage circuit was activated, you have to replace the fuse resistor at location RB/LB06 on the CRT-board.

POWER SUPPLY - SECONDARY SIDE : U-TIMER

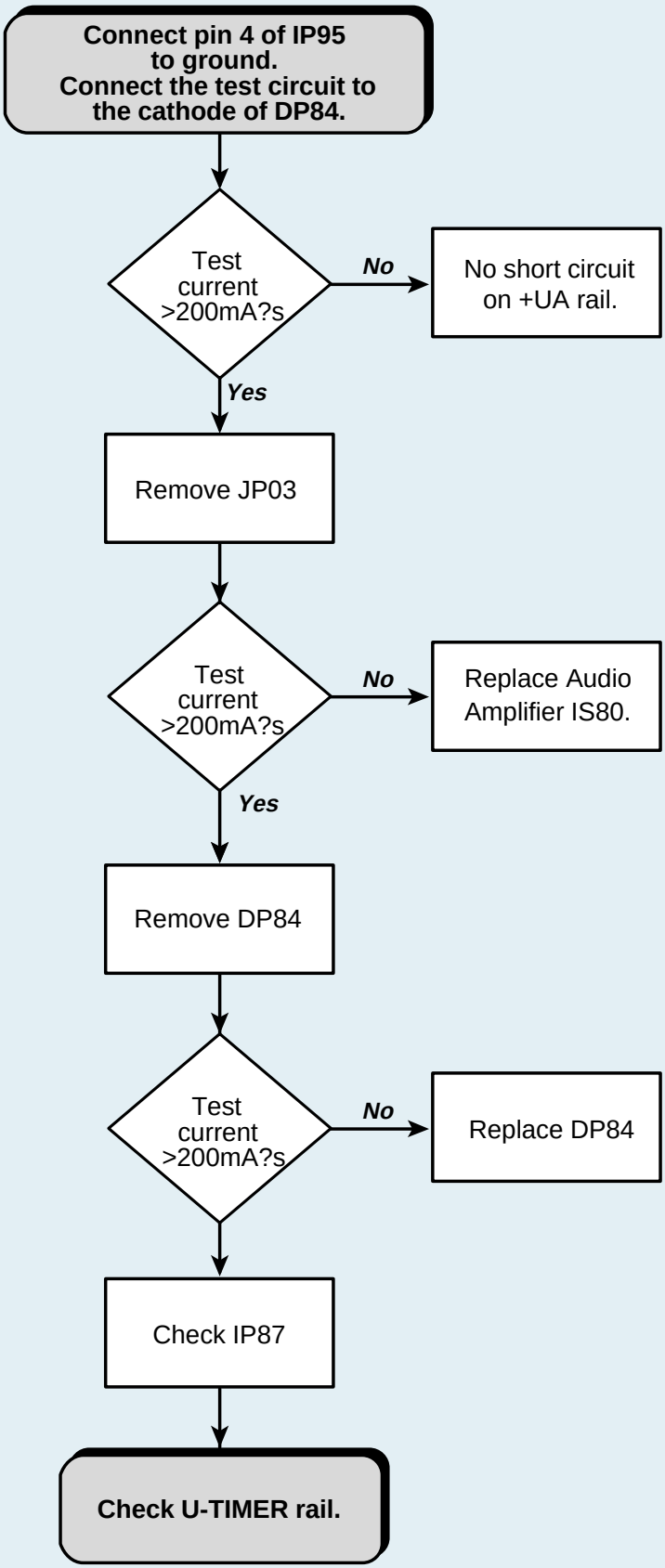

Connect pin 4 of IP95 to ground. Connect the test circuit to the cathode of DP93.
Test current >200mA?s
No
Voltage at pin 9 of IP95 = 5.1V
No
Check +5VUP and 5V_VCC rails
Yes
Yes
Remove LL31
Measure +8V rail (at pin 8 of IP95) >1.3V
Test current >200mA?s
No
Check line driver circuit, TL32, etc.
Yes
Check DP93 and IP95
Connect pins 4 and 9 of IP95.
Test current >500mA?s
No
Voltage at pin 8 of IP95 = 8.1V
No
Check voltage at pin 4 of IP95 and DP94 and CP96.
Yes
Yes
Check +8V rail to AP, DP, OS, SCART and KDB
No short circuit on U-TIMER

After finishing this test, please replace LL31, remove the link between pins 4 and 9 of IP95 and remove the test circuit.

General: All measurements must be taken with the TV connected to the mains supply via an Isolation Transformer.

Important information:
If the over-voltage circuit was activated, you have to replace the fuse resistor at location RB/LB06 on the CRT-board.

POWER SUPPLY - SECONDARY SIDE : +UA



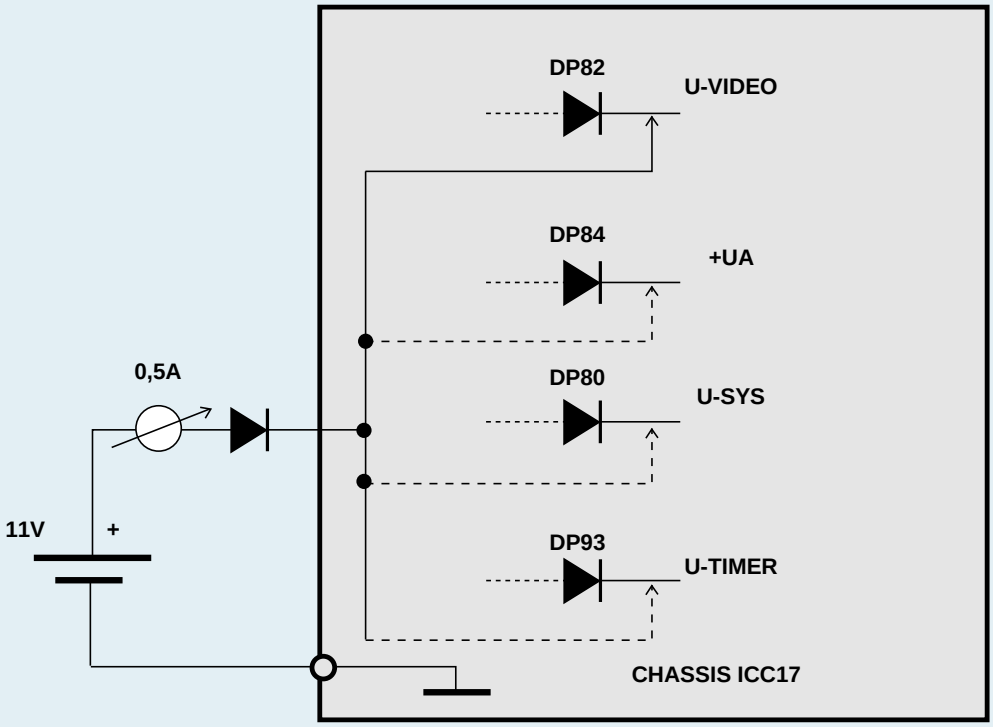
General: All measurements must be taken with the TV connected to the mains supply via an Isolation Transformer.

Important information:
If the over-voltage circuit was activated, you have to replace the fuse resistor at location RB/LB06 on the CRT-board.

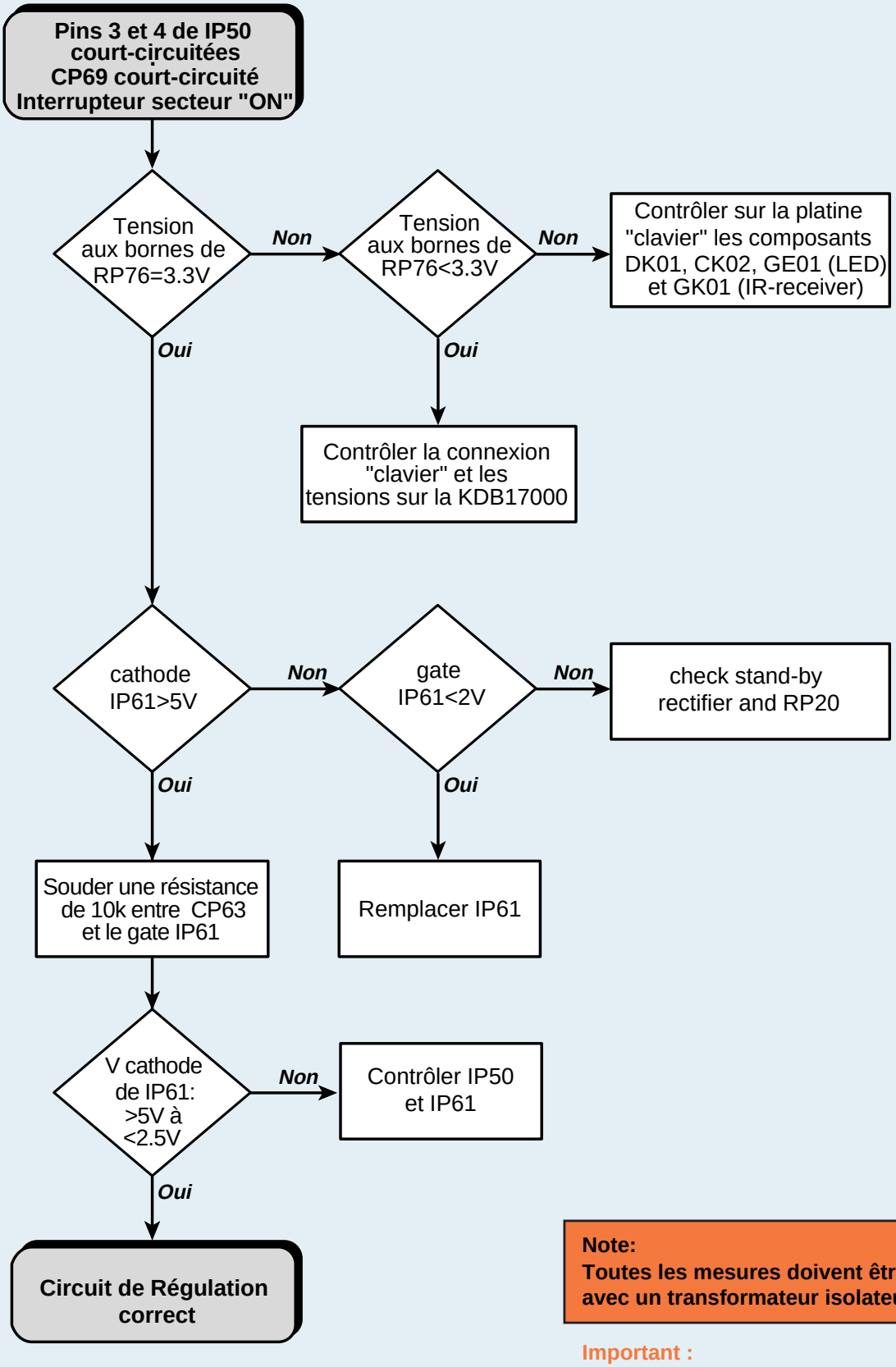
TENSIONS SECONDAIRES

Toutes les mesures de ce chapitre doivent être effectuées SANS alimentation secteur.
Utiliser une Alimentation continue externe

Circuit Test:
L'alimentation externe est une alimentation continue de 11V réglable avec un courant de limitation de 0.5A.
Le pôle - est relié à la masse secondaire du chassis.
Le pôle + de l'alimentation externe sera réunie à travers une diode, aux circuits de charge indiqués en début d'organigramme.(voir schéma ci-contre).
Le courant de charge devra être mesuré.



ALIMENTATION STANDBY - PARTIE SECONDAIRE

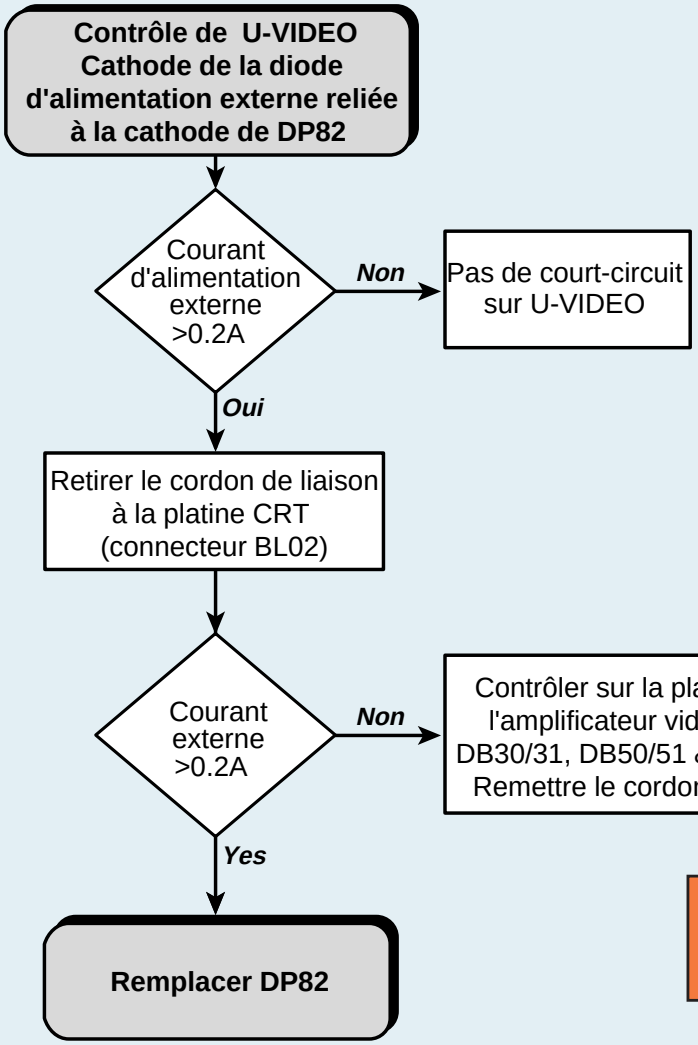


Note:
Toutes les mesures doivent être effectuées avec un transformateur isolateur du secteur

Après les tests remettre les circuits dans leur configuration d'origine ,
Exemple : Retirer la résitance de 10k et les court-circuits au niveau de CP69 et de IP50.

Important :
Si le circuit de protection contre les sur-tensions est actif remplacer la résistance fusible RB/LB06 de la platine CRT.

ALIMENTATION - PARTIE SECONDAIRE : U-VIDEO

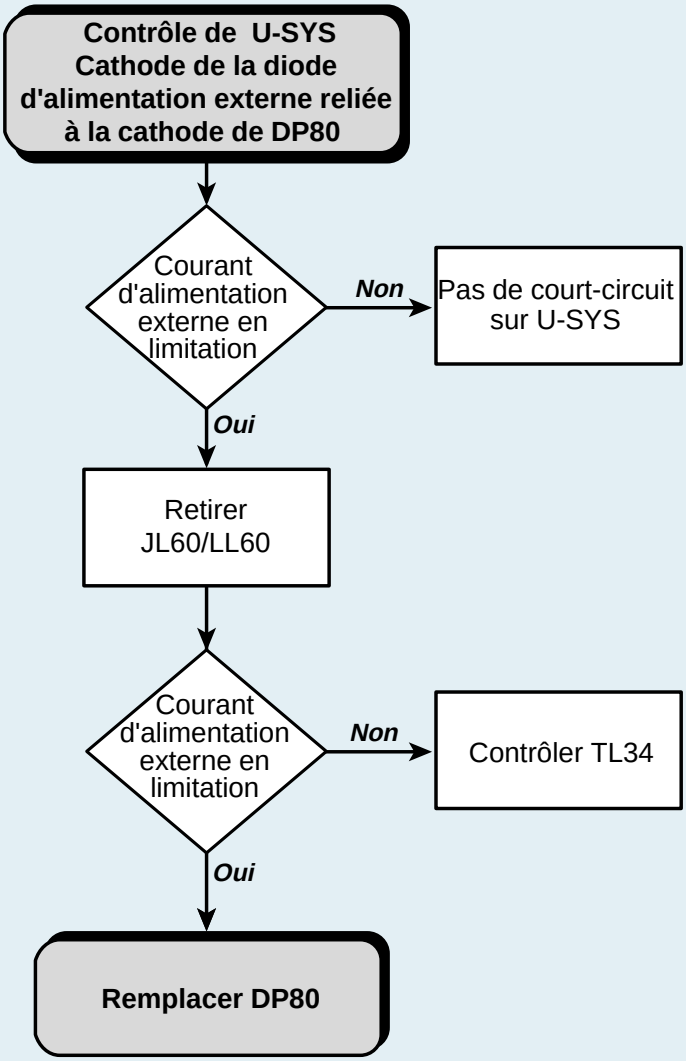

Contrôle de U-VIDEO
Cathode de la diode d'alimentation externe reliée à la cathode de DP82
Courant d'alimentation externe >0.2A
Non
Pas de court-circuit sur U-VIDEO
Oui
Retirer le cordon de liaison à la platine CRT (connecteur BL02)
Courant externe >0.2A
Non
Contrôler sur la platine CRT l'amplificateur vidéo IB01, DB30/31, DB50/51 & DB70/71. Remettre le cordon de BL02
Yes
Remplacer DP82

Après les tests remettre les circuits dans leur configuration d'origine.
Exemple : Remettre le cable de liaison à la CRT : BL02

Note:
Toutes les mesures doivent être effectuées avec un transformateur isolateur du secteur

Important :
Si le circuit de protection contre les sur-tensions est actif remplacer la résistance fusible RB/LB06 de la platine CRT.

ALIMENTATION - PARTIE SECONDAIRE : U-SYS

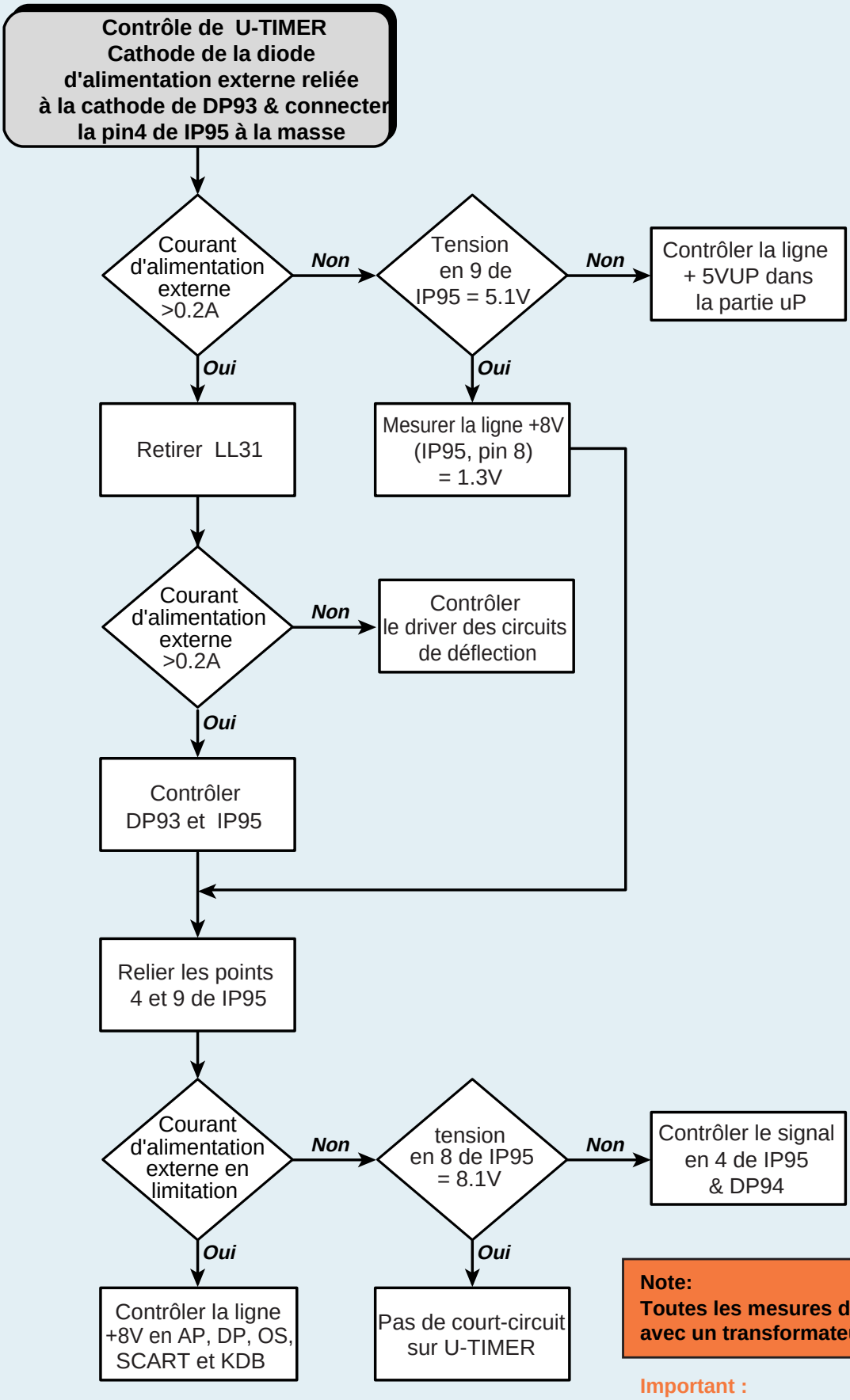


Après les tests remettre les circuits dans leur configuration d'origine.
Exemple : JL60 / LL60

Note:
Toutes les mesures doivent être effectuées avec un transformateur isolateur du secteur

Important :
Si le circuit de protection contre les sur-tensions est actif remplacer la résistance fusible RB/LB06 de la platine CRT.

ALIMENTATION - PARTIE SECONDAIRE : U-TIMER

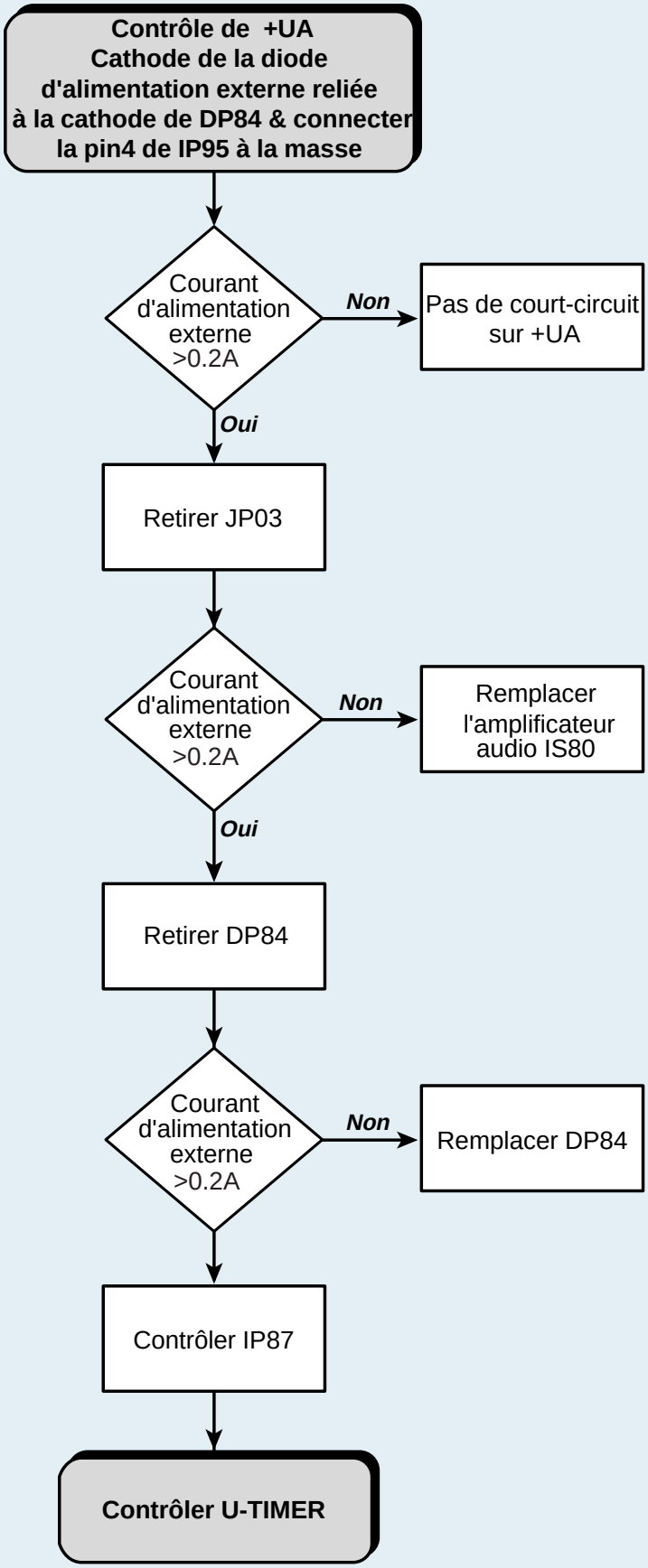

Contrôle de U-TIMER
Cathode de la diode d'alimentation externe reliée à la cathode de DP93 & connecter la pin4 de IP95 à la masse
Courant d'alimentation externe >0.2A
Non
Tension en 9 de IP95 = 5.1V
Non
Contrôler la ligne + 5VUP dans la partie uP
Oui
Oui
Retirer LL31
Mesurer la ligne +8V (IP95, pin 8) = 1.3V
Courant d'alimentation externe >0.2A
Non
Contrôler le driver des circuits de déflection
Oui
Contrôler DP93 et IP95
Relier les points 4 et 9 de IP95
Courant d'alimentation externe en limitation
Non
tension en 8 de IP95 = 8.1V
Non
Contrôler le signal en 4 de IP95 & DP94
Oui
Oui
Contrôler la ligne +8V en AP, DP, OS, SCART et KDB
Pas de court-circuit sur U-TIMER

Après les tests remettre les circuits dans leur configuration d'origine.
Exemple : LL31, 4 et 9 de IP95.

Note:
Toutes les mesures doivent être effectuées avec un transformateur isolateur du secteur

Important :
Si le circuit de protection contre les sur-tensions est actif remplacer la résistance fusible RB/LB06 de la platine CRT.

ALIMENTATION - PARTIE SECONDAIRE : +UA



Après les tests remettre les circuits dans leur configuration d'origine.
Exemple : JP03.

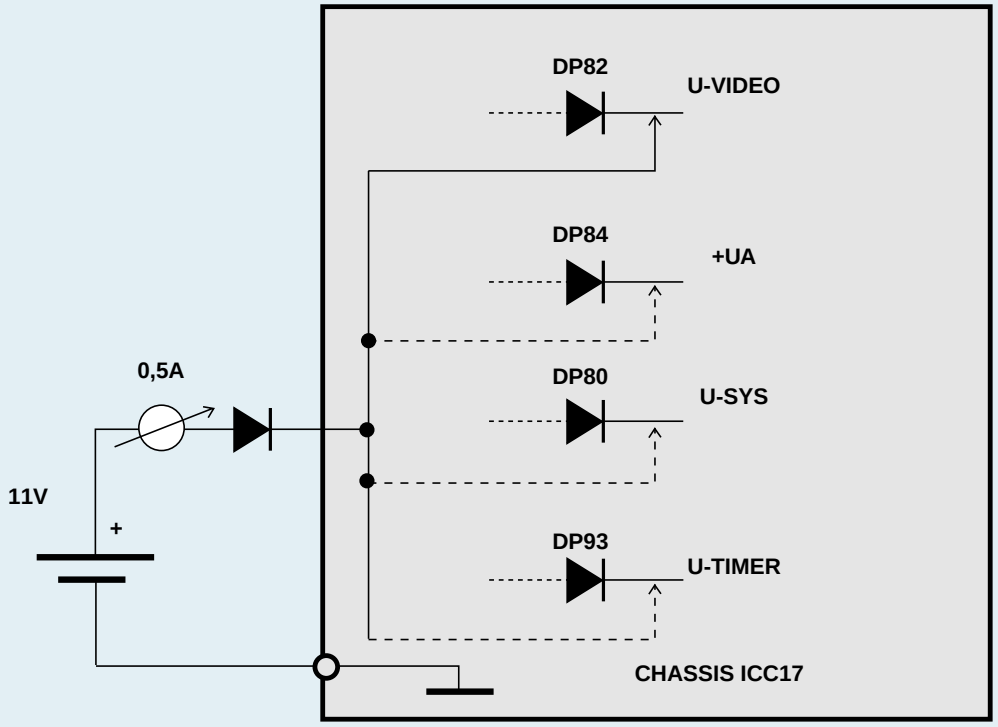
Note:
Toutes les mesures doivent être effectuées avec un transformateur isolateur du secteur

Important :
Si le circuit de protection contre les sur-tensions est actif remplacer la résistance fusible RB/LB06 de la platine CRT.

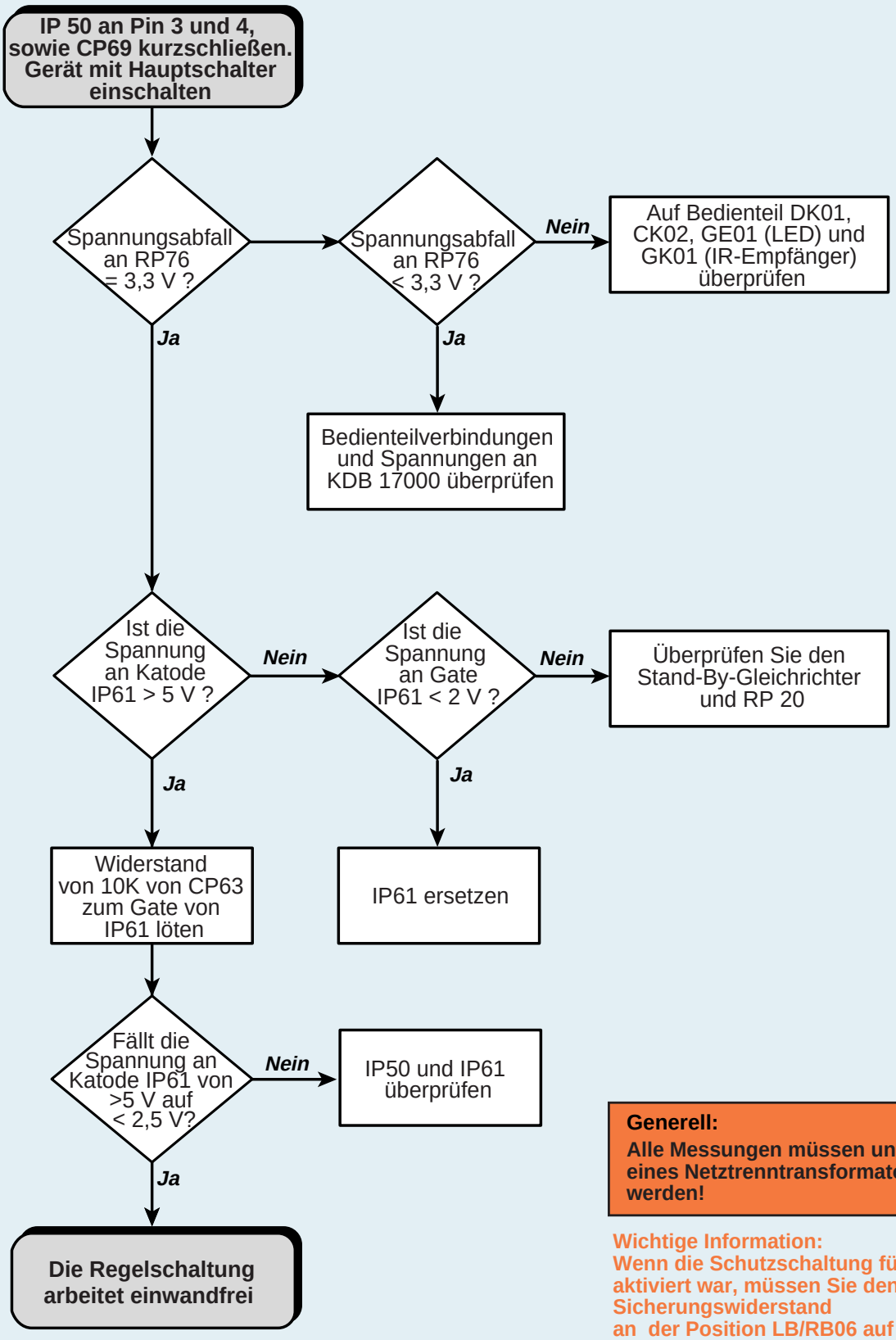
ÜBERPRÜFUNG DER SEKUNDÄRSEITIGEN GLEICHSPANNUNGEN

Alle Messungen in diesem Kapitel müssen ohne Netzspannung vorgenommen werden. Benutzen Sie dieTestschaltung.

Testschaltung:
Die externe Spannung ist an ein externes Netzteil mit einer eingestellten Spannung von 11 V und einer Strombegrenzung von 0,5 A angeschlossen
Der Minuspol der externen Spannungsquelle wird direkt mit der Masse des sekundären Netzteils verbunden! Der Pluspol der externen Spannungsquelle wird über eine Diode eingespeist, wobei die Anode dieser Diode mit dem Pluspol verbunden ist. Die Katode ist mit dem entsprechenden Einspeisepunkt auf dem Chassis verbunden..
Der Strom muß gemessen werden.



STANDBY-BY NETZTEIL SEKUNDÄRSEITE

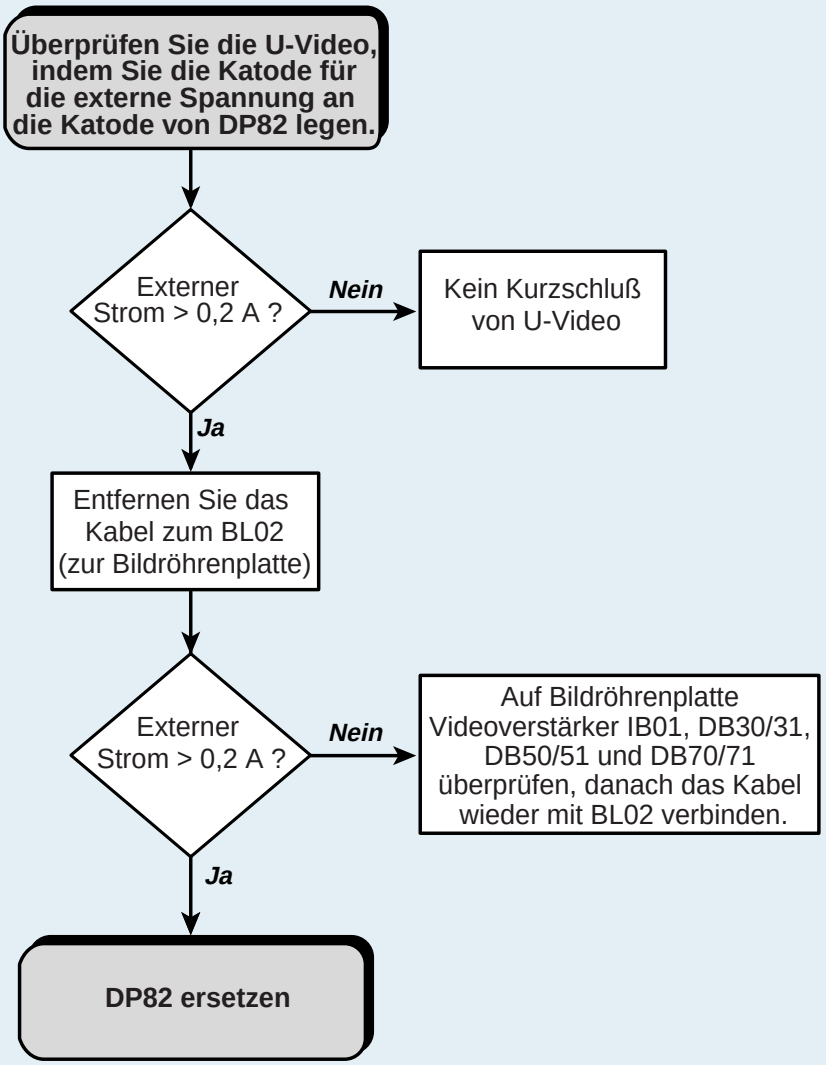


Generell:
Alle Messungen müssen unter Verwendung eines Netztrenntransformators vorgenommen werden!

Wichtige Information:
Wenn die Schutzschaltung für Überspannung aktiviert war, müssen Sie den Sicherungswiderstand an der Position LB/RB06 auf der Bildrohrplatte ersetzen!

Nach Beendigung der Überprüfung alle Modifikationen rückgängig machen, z. B. CP69, IP50, 10K.

HAUPTNETZTEIL SEKUNDÄRSEITE: VIDEOSPANNUNG U-VIDEO

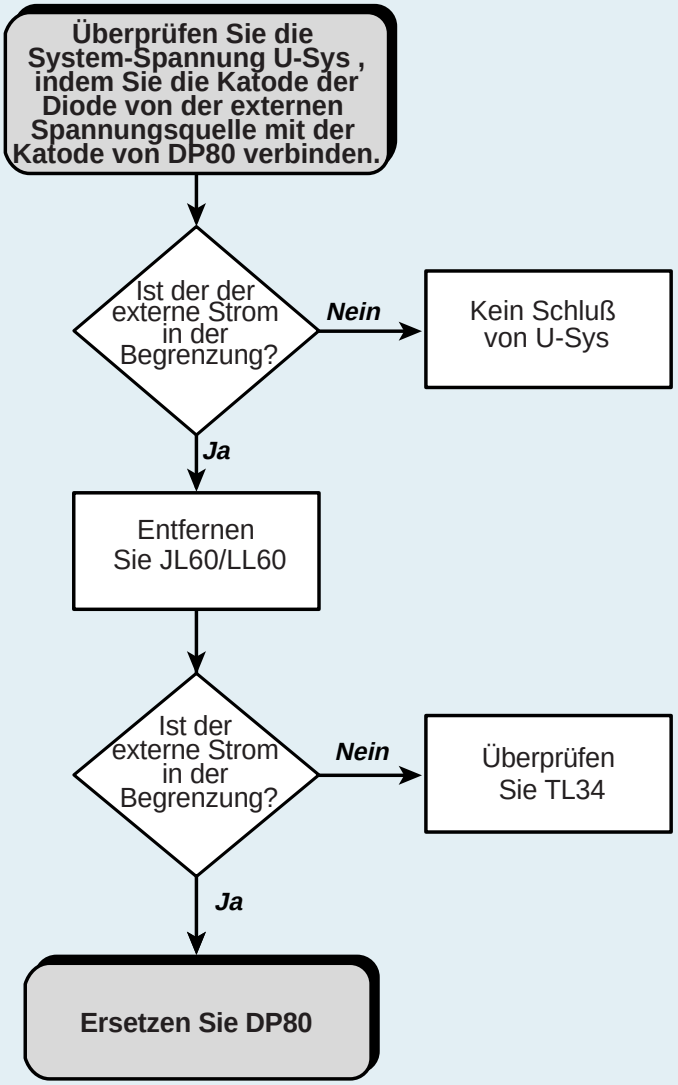

Überprüfen Sie die U-Video, indem Sie die Katode für die externe Spannung an die Katode von DP82 legen.
Externer Strom > 0,2 A ?
Nein
Kein Kurzschluß von U-Video
Ja
Entfernen Sie das Kabel zum BL02 (zur Bildröhrenplatte)
Externer Strom > 0,2 A ?
Nein
Auf Bildröhrenplatte Videoverstärker IB01, DB30/31, DB50/51 und DB70/71 überprüfen, danach das Kabel wieder mit BL02 verbinden.
Ja
DP82 ersetzen

Nach Beendigung der Überprüfung alle Modifikationen rückgängig machen, z. B. BL02!

Generell:
Alle Messungen müssen unter Verwendung eines Netztrenntransformators vorgenommen werden!

Wichtige Information:
Wenn die Schutzschaltung für Überspannung aktiviert war, müssen Sie den Sicherungswiderstand an der Position LB/RB06 auf der Bildrohrplatte ersetzen!

HAUPTNETZTEIL SEKUNDÄRSEITE: SYSTEM-SPANNUNG U-SYS

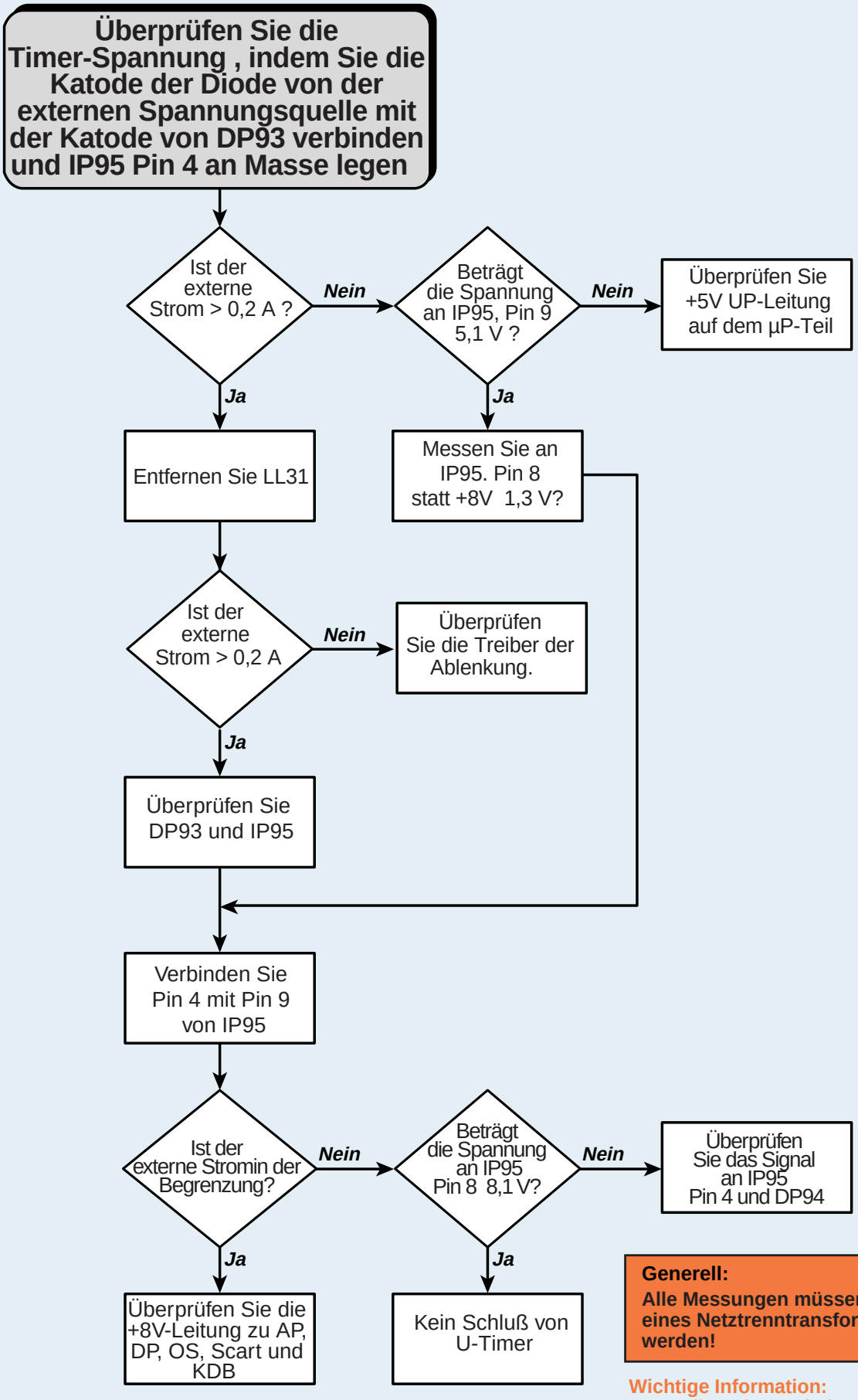

Überprüfen Sie die System-Spannung U-Sys , indem Sie die Katode der Diode von der externen Spannungsquelle mit der Katode von DP80 verbinden.
Ist der externe Strom in der Begrenzung?
Nein
Kein Schluß von U-Sys
Ja
Entfernen Sie JL60/LL60
Ist der externe Strom in der Begrenzung?
Nein
Überprüfen Sie TL34
Ja
Ersetzen Sie DP80

Nach Beendigung der Überprüfung alle Modifikationen rückgängig machen, z. B. JL60/LL60

Generell:
Alle Messungen müssen unter Verwendung eines Netztrenntransformators vorgenommen werden!

Wichtige Information:
Wenn die Schutzschaltung für Überspannung aktiviert war, müssen Sie den Sicherungswiderstand an der Position LB/RB06 auf der Bildrohrplatte ersetzen!

HAUPTNETZTEIL SEKUNDÄRSEITE: TIMER-SPANNUNG U-TIMER

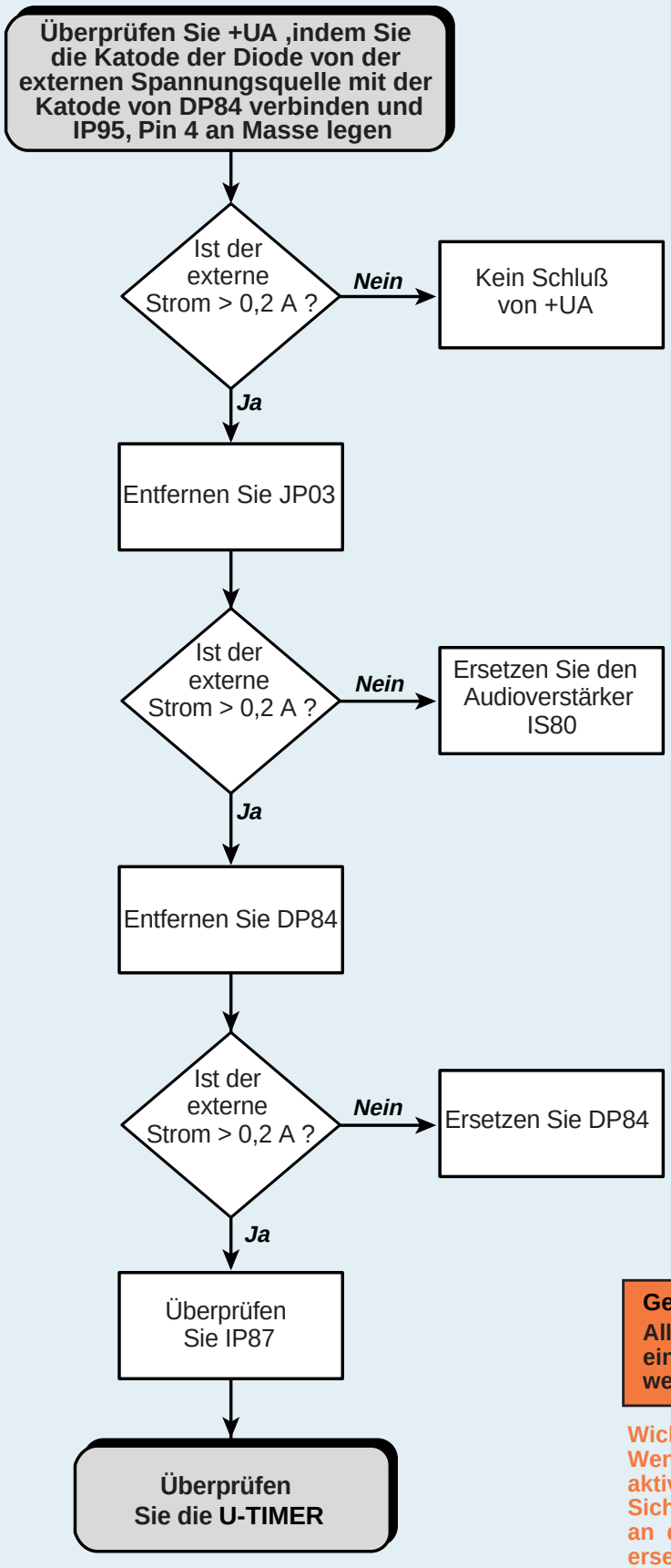

Überprüfen Sie die Timer-Spannung , indem Sie die Katode der Diode von der externen Spannungsquelle mit der Katode von DP93 verbinden und IP95 Pin 4 an Masse legen
Ist der externe Strom > 0,2 A ?
Nein
Beträgt die Spannung an IP95, Pin 9 5,1 V ?
Nein
Überprüfen Sie +5V UP-Leitung auf dem µP-Teil
Ja
Ja
Entfernen Sie LL31
Messen Sie an IP95. Pin 8 statt +8V 1,3 V?
Ist der externe Strom > 0,2 A
Nein
Überprüfen Sie die Treiber der Ablenkung.
Ja
Überprüfen Sie DP93 und IP95
Verbinden Sie Pin 4 mit Pin 9 von IP95
Ist der externe Stromin der Begrenzung?
Nein
Beträgt die Spannung an IP95 Pin 8 8,1 V?
Nein
Überprüfen Sie das Signal an IP95 Pin 4 und DP94
Ja
Ja
Überprüfen Sie die +8V-Leitung zu AP, DP, OS, Scart und KDB
Kein Schluß von U-Timer

Nach Beendigung der Überprüfung alle Modifikationen rückgängig machen, z. B. LL31

Generell:
Alle Messungen müssen unter Verwendung eines Netztrenntransformators vorgenommen werden!

Wichtige Information:
Wenn die Schutzschaltung für Überspannung aktiviert war, müssen Sie den Sicherungswiderstand an der Position LB/RB06 auf der Bildrohrplatte ersetzen!

HAUPTNETZTEIL SEKUNDÄRSEITE: SPANNUNG +UA


Überprüfen Sie +UA ,indem Sie die Katode der Diode von der externen Spannungsquelle mit der Katode von DP84 verbinden und IP95, Pin 4 an Masse legen
Ist der externe Strom > 0,2 A ?
Nein
Kein Schluß von +UA
Ja
Entfernen Sie JP03
Ist der externe Strom > 0,2 A ?
Nein
Ersetzen Sie den Audioverstärker IS80
Ja
Entfernen Sie DP84
Ist der externe Strom > 0,2 A ?
Nein
Ersetzen Sie DP84
Ja
Überprüfen Sie IP87
Überprüfen Sie die U-TIMER

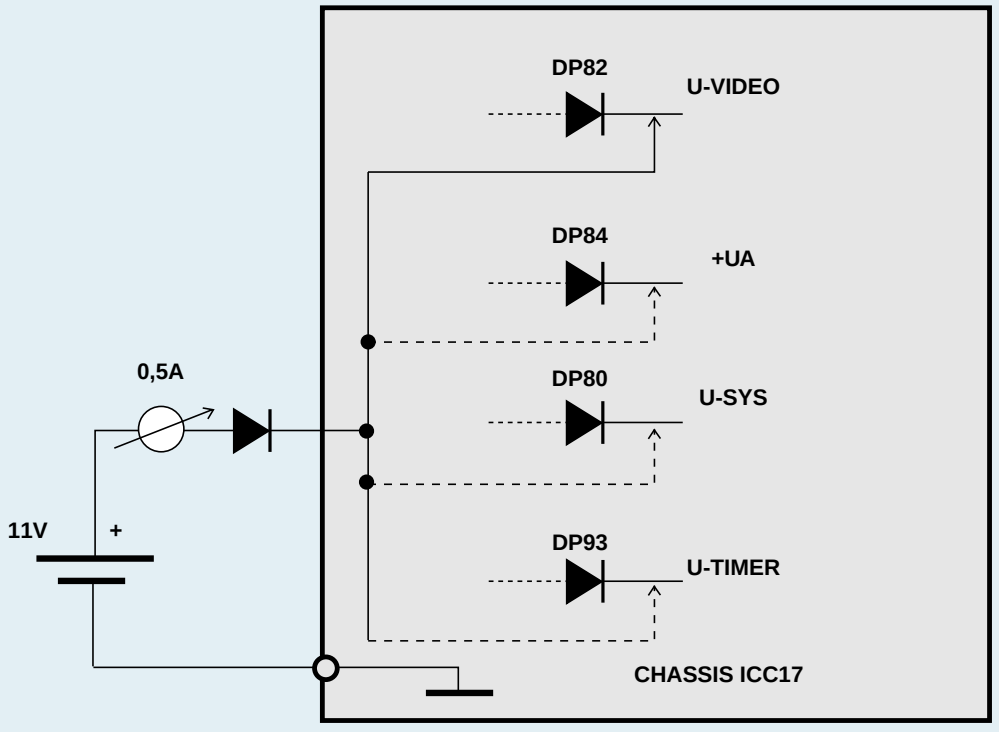
Generell:
Alle Messungen müssen unter Verwendung eines Netztrenntransformators vorgenommen werden!

Wichtige Information:
Wenn die Schutzschaltung für Überspannung aktiviert war, müssen Sie den Sicherungswiderstand an der Position LB/RB06 auf der Bildrohrplatte ersetzen!

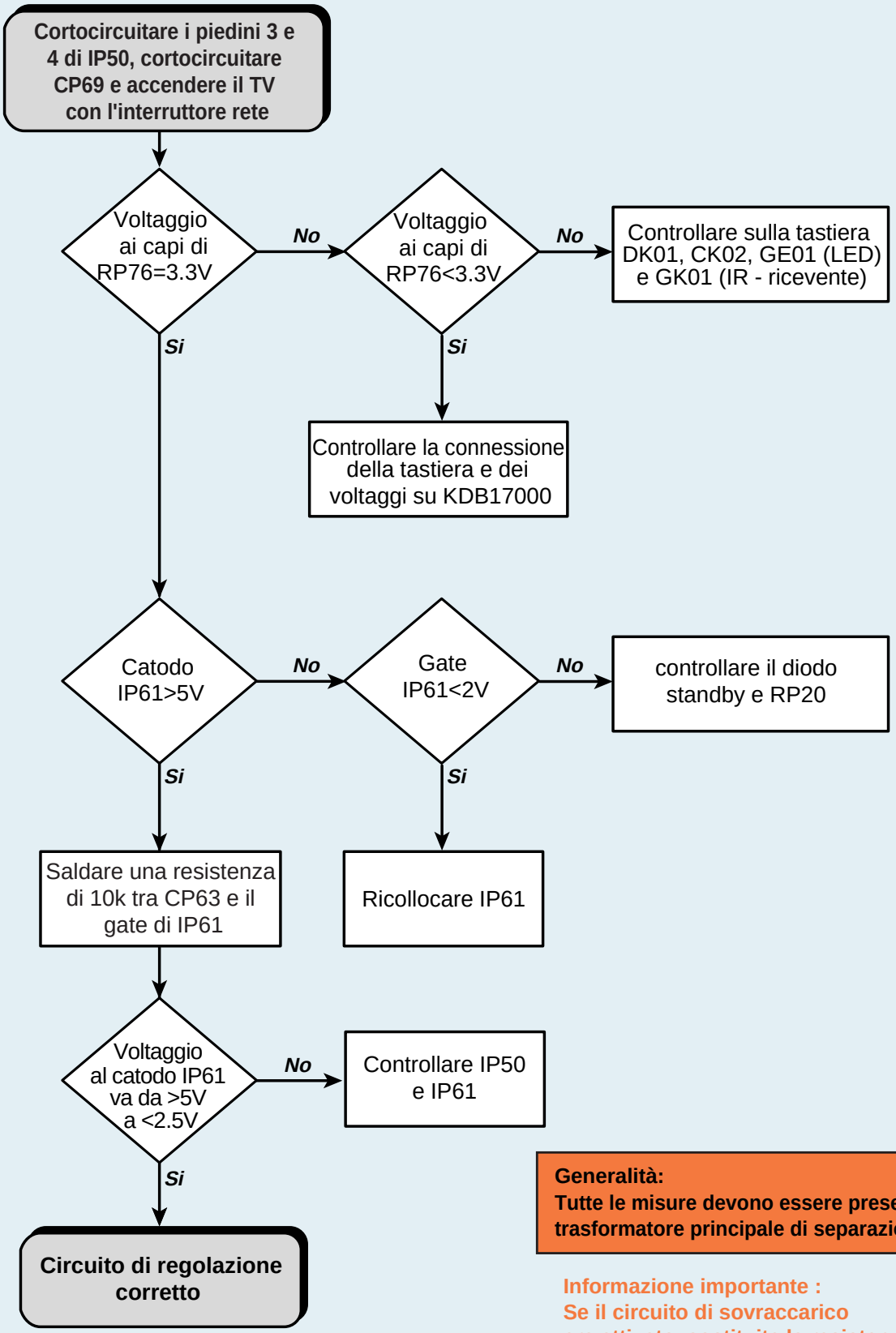
VOLTAGGI DC SECONDARI

Tutte le misurazioni in questo capitolo dovrebbero essere fatte SENZA i voltaggi principali.

Test del circuito:
il voltaggio esterno è una fornitura d'energia esterna DC con un voltaggio regolato di 11V e una limitazione di corrente a 0,5A.
Il polo della fornitura del voltaggio esterno deve essere direttamente connesso al campo secondario del telaio.
Il polo + della fornitura del voltaggio esterno fornisce il carico tramite un diodo.
L'anodo di questo diodo è connesso al polo +, il catodo è connesso al carico sul telaio. La corrente deve essere misurata.



ALIMENTAZIONE STANDBY – LATO SECONDARIO

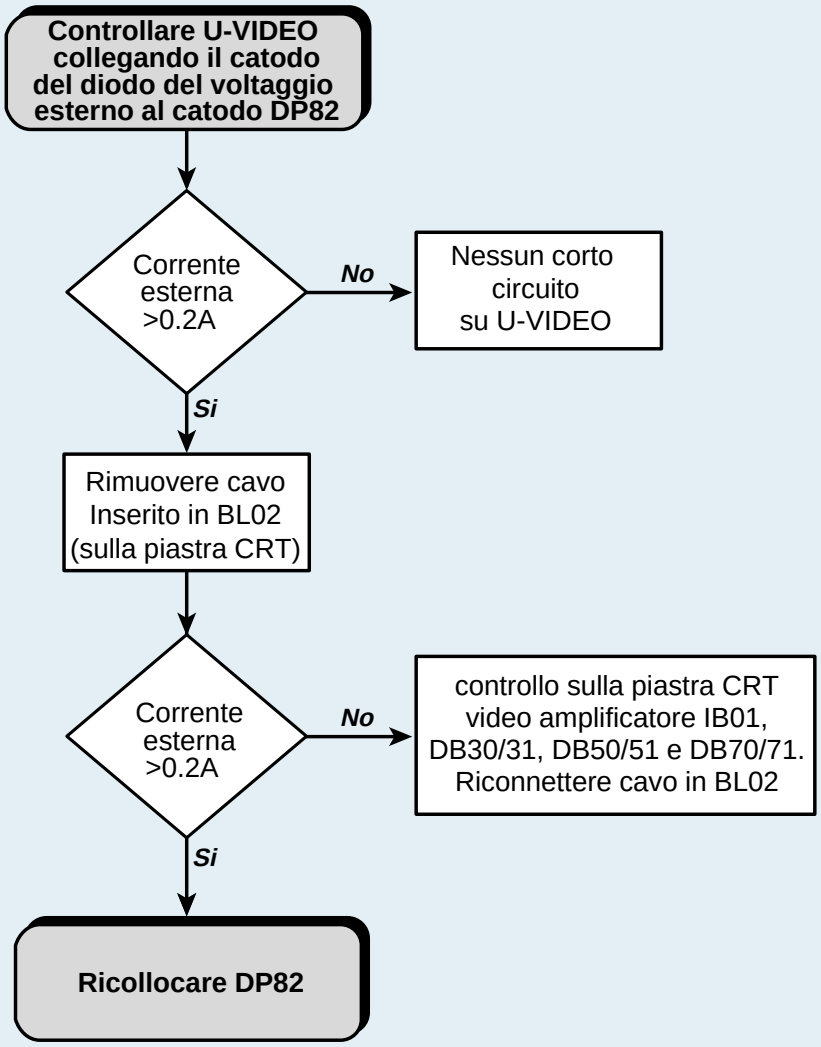


Generalità:
Tutte le misure devono essere prese con un trasformatore principale di separazione.

Informazione importante :
Se il circuito di sovraccarico era attivato, sostituite la resistenza fusibile nella posizione RB/LB06 sulla piastra CRT.

Alla fine, riportare il circuito all'origine (togliere la resistenza di 10k e i cortocircuiti di CP69, IP50).

ALIMENTAZIONE – LATO SECONDARIO : U-VIDEO

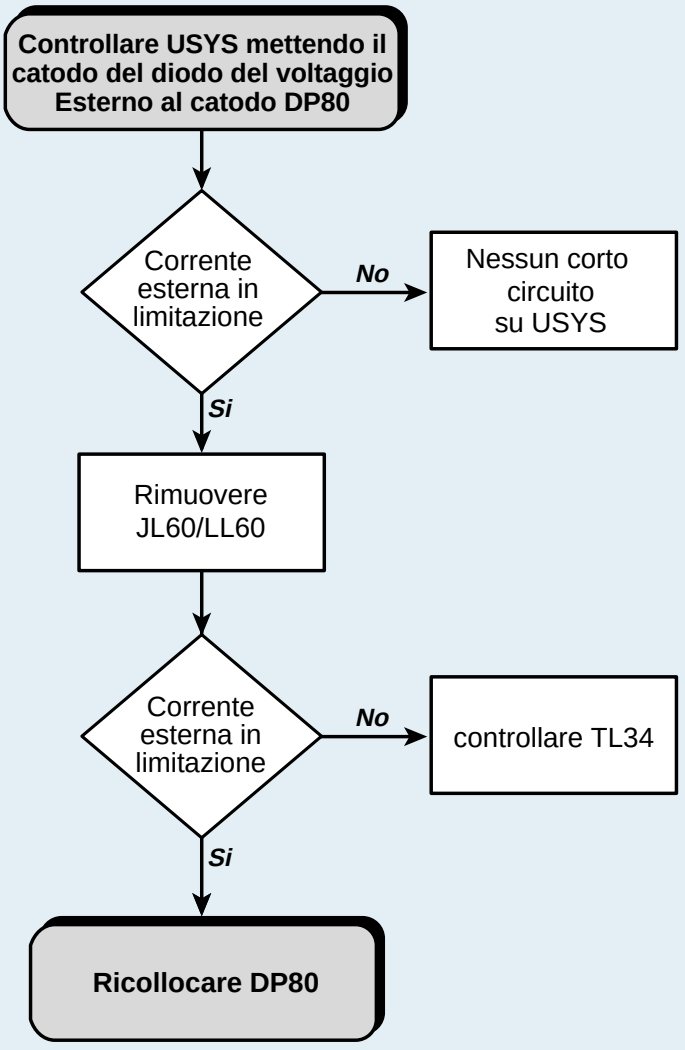

Controllare U-VIDEO collegando il catodo del diodo del voltaggio esterno al catodo DP82
Corrente esterna >0.2A
No
Nessun corto circuito su U-VIDEO
Si
Rimuovere cavo Inserito in BL02 (sulla piastra CRT)
Corrente esterna >0.2A
No
controllo sulla piastra CRT video amplificatore IB01, DB30/31, DB50/51 e DB70/71. Riconnettere cavo in BL02
Si
Ricollocare DP82

Alla fine, reportare il circuito all'origine. Es: collegare il cavo in BL02

Generalità:
Tutte le misure devono essere prese con un trasformatore principale di separazione.

Informazione importante :
Se il circuito di sovraccarico era attivato, sostituite la resistenza fusibile nella posizione RB/LB06 sulla piastra CRT.

ALIMENTAZIONE – LATO SECONDARIO : U-SYS

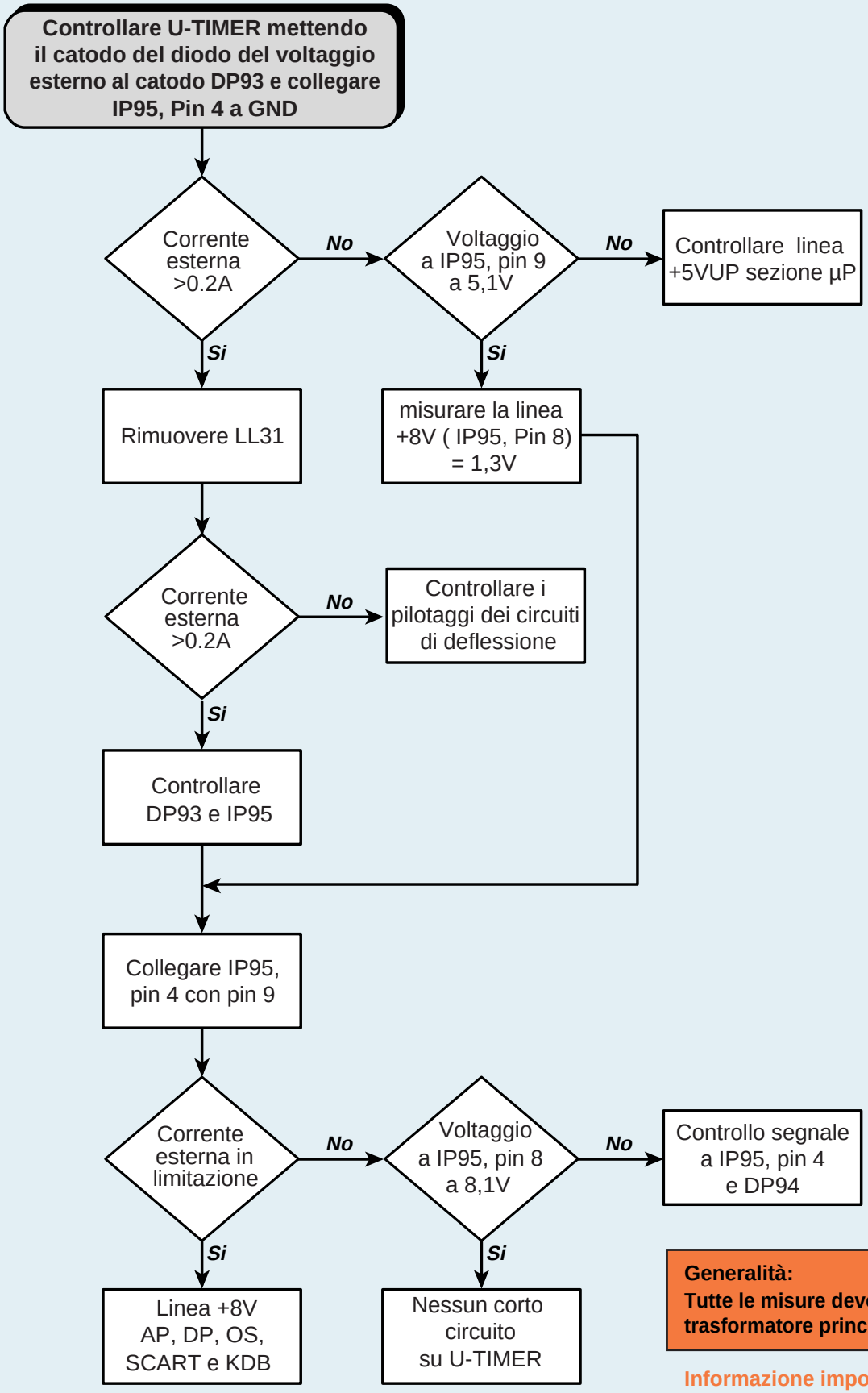


Alla fine, riportare il circuito all'origine (modificare JL60/LL60)

Generalità:
Tutte le misure devono essere prese con un trasformatore principale di separazione.

Informazione importante :
Se il circuito di sovraccarico era attivato, sostituite la resistenza fusibile nella posizione RB/LB06 sulla piastra CRT.

ALIMENTAZIONE – LATO SECONDARIO : U-TIMER

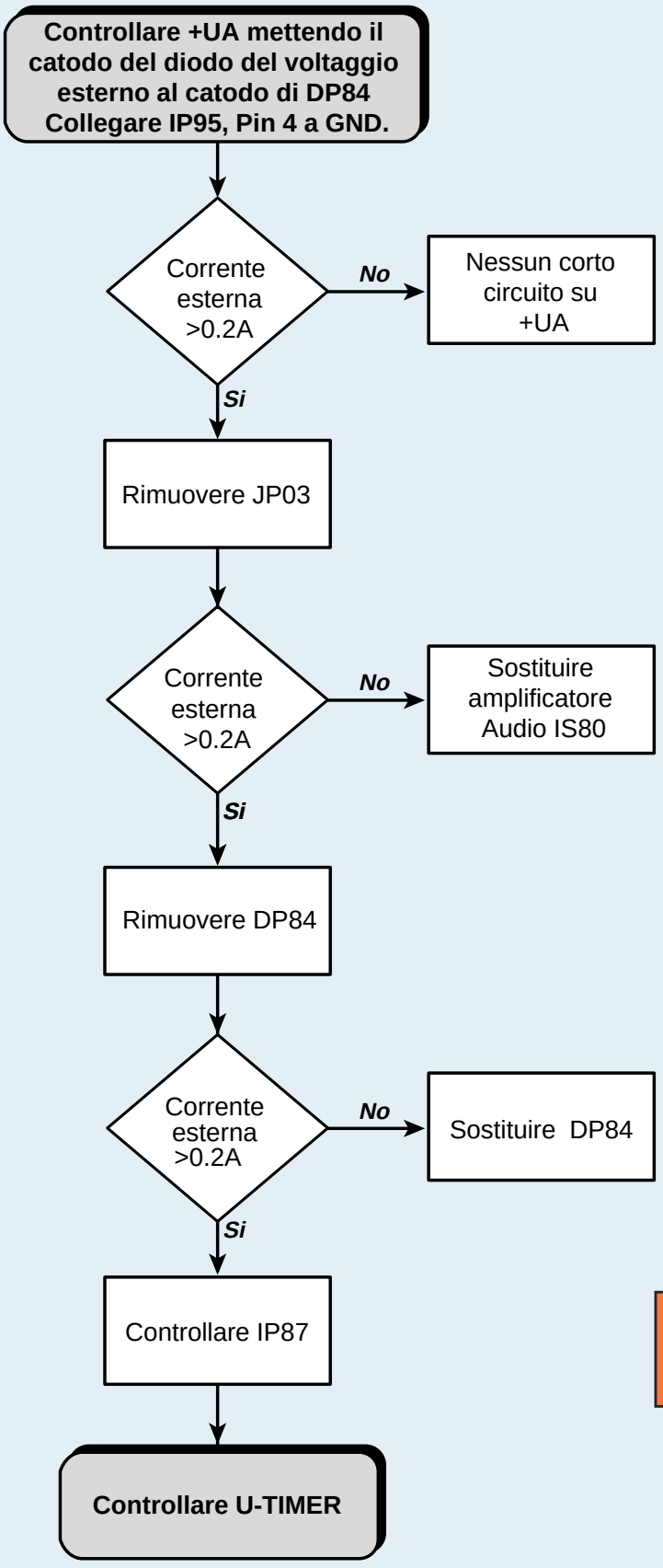

Controllare U-TIMER mettendo il catodo del diodo del voltaggio esterno al catodo DP93 e collegare IP95, Pin 4 a GND
Corrente esterna >0.2A
No
Voltaggio a IP95, pin 9 a 5,1V
No
Controllare linea +5VUP sezione µP
Si
Si
Rimuovere LL31
misurare la linea +8V (IP95, Pin 8) = 1,3V
Corrente esterna >0.2A
No
Controllare i pilotaggi dei circuiti di deflessione
Si
Controllare DP93 e IP95
Collegare IP95, pin 4 con pin 9
Corrente esterna in limitazione
No
Voltaggio a IP95, pin 8 a 8,1V
No
Controllo segnale a IP95, pin 4 e DP94
Si
Si
Linea +8V AP, DP, OS, SCART e KDB
Nessun corto circuito su U-TIMER

Alla fine, riportare il circuito all'origine (modificare LL31)

Generalità:
Tutte le misure devono essere prese con un trasformatore principale di separazione.

Informazione importante :
Se il circuito di sovraccarico era attivato, sostituite la resistenza fusibile nella posizione RB/LB06 sulla piastra CRT.

ALIMENTAZIONE – LATO SECONDARIO : +UA



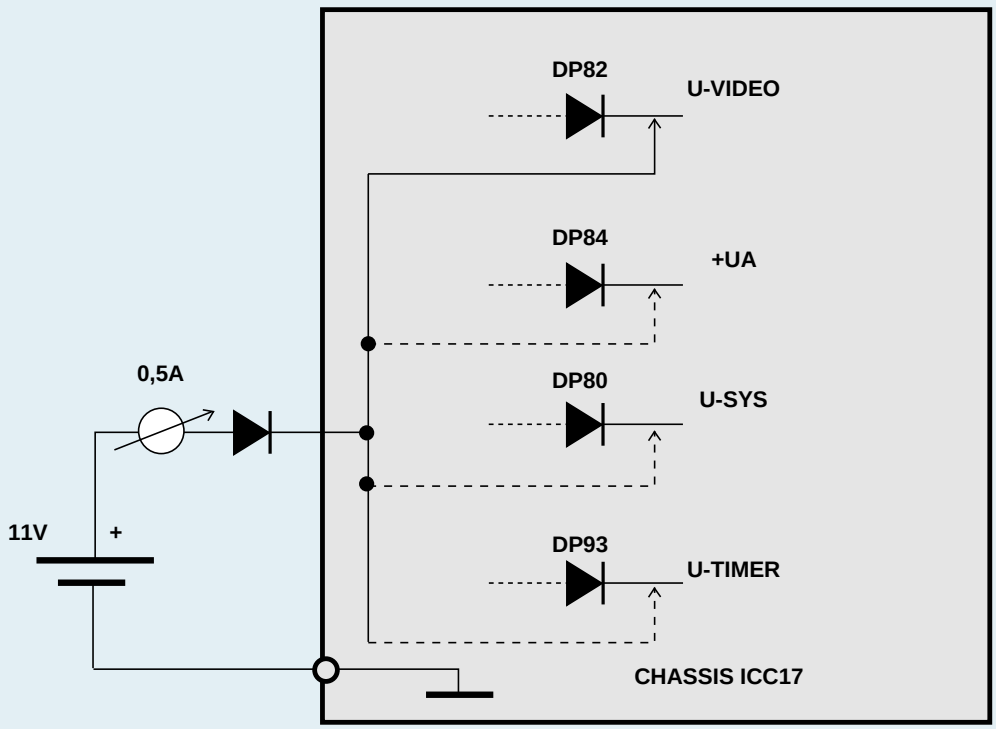
Generalità:
Tutte le misure devono essere prese con un trasformatore principale di separazione.

Informazione importante :
Se il circuito di sovraccarico era attivato, sostituite la resistenza fusibile nella posizione RB/LB06 sulla piastra CRT.

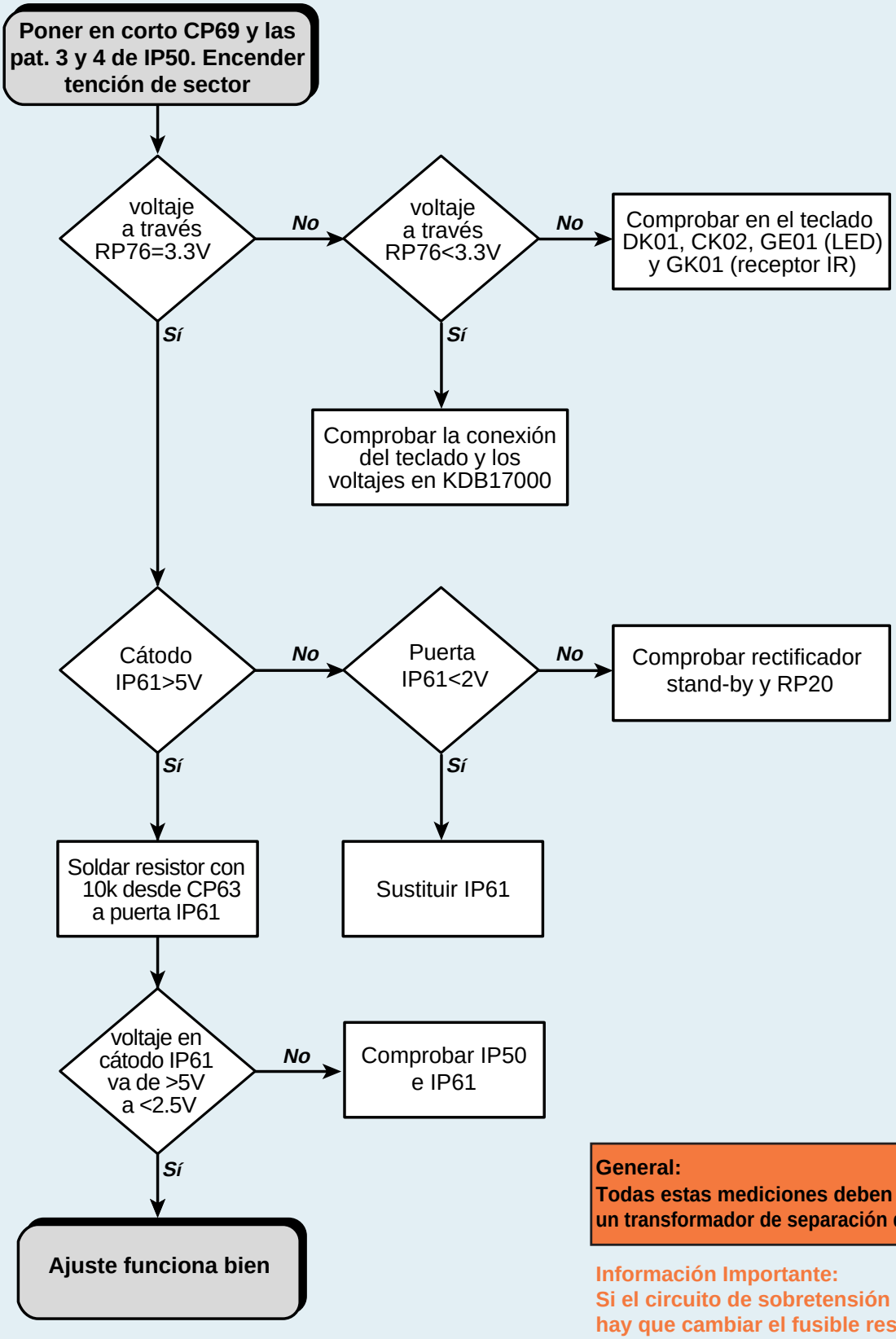
VOLTAJES DC SECUNDARIOS

Todas las mediciones en este capítulo deberán hacerse SIN tensión de sector.

Test circuito:
El voltaje externo es una alimentación DC externa con un voltaje ajustado de 11V y una limitación de corriente de 0.5A. El polo de la alimentación del voltaje externo debe estar directamente conectado a toma de tierra secundaria del chasis.
El polo+ de la alimentación del voltaje externo alimenta la carga a través de un diodo.
El ánodo del diodo está conectado al polo+, el cátodo de este diodo está conectado a la carga en el chasis. La corriente debe ser medida.



ALIMENTACION STAND BY – LADO SECUNDARIO

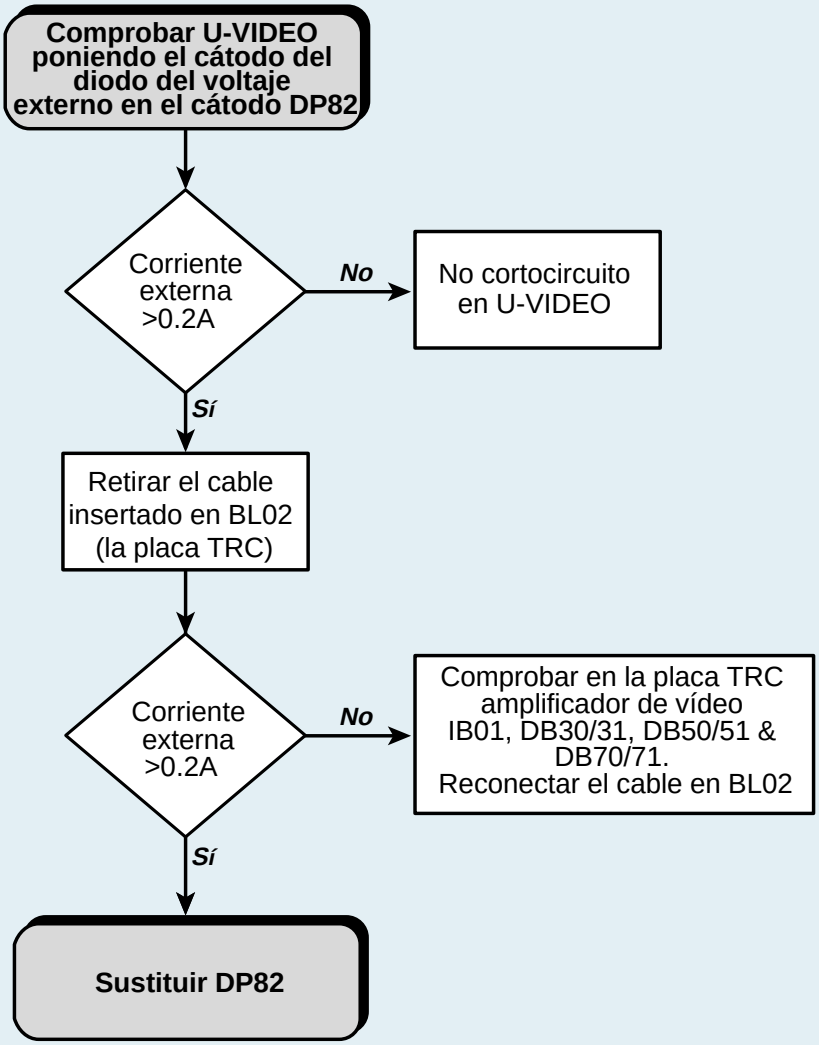


General:
Todas estas mediciones deben hacerse con un transformador de separación de alimentación.

Información Importante:
Si el circuito de sobretensión estaba activado, hay que cambiar el fusible resistor en posición RB/LB06 en la placa TRC.

Después de acabar la comprobación,
restituya cada modificación, p. ej. CP69, IP50, 10k

ALIMENTACION – LADO SECUNDARIO : U-VIDEO

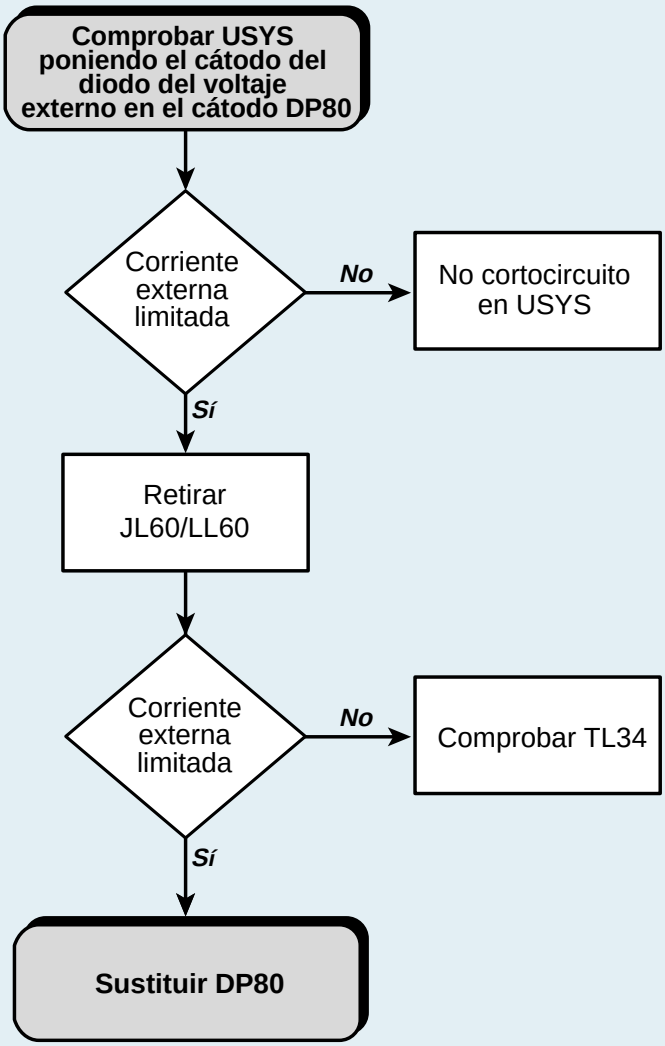

Comprobar U-VIDEO poniendo el cátodo del diodo del voltaje externo en el cátodo DP82
Corriente externa >0.2A
No
No cortocircuito en U-VIDEO
Sí
Retirar el cable insertado en BL02 (la placa TRC)
Corriente externa >0.2A
No
Comprobar en la placa TRC amplificador de vídeo IB01, DB30/31, DB50/51 & DB70/71. Reconectar el cable en BL02
Sí
Sustituir DP82

Después de acabar la comprobación, restituya cada modificación, p. ej. BL02

General:
Todas estas mediciones deben hacerse con un transformador de separación de alimentación.

Información Importante:
Si el circuito de sobretensión estaba activado, hay que cambiar el fusible resistor en posición RB/LB06 en placa TRC.

ALIMENTACION – LADO SECUNDARIO : U-SYS

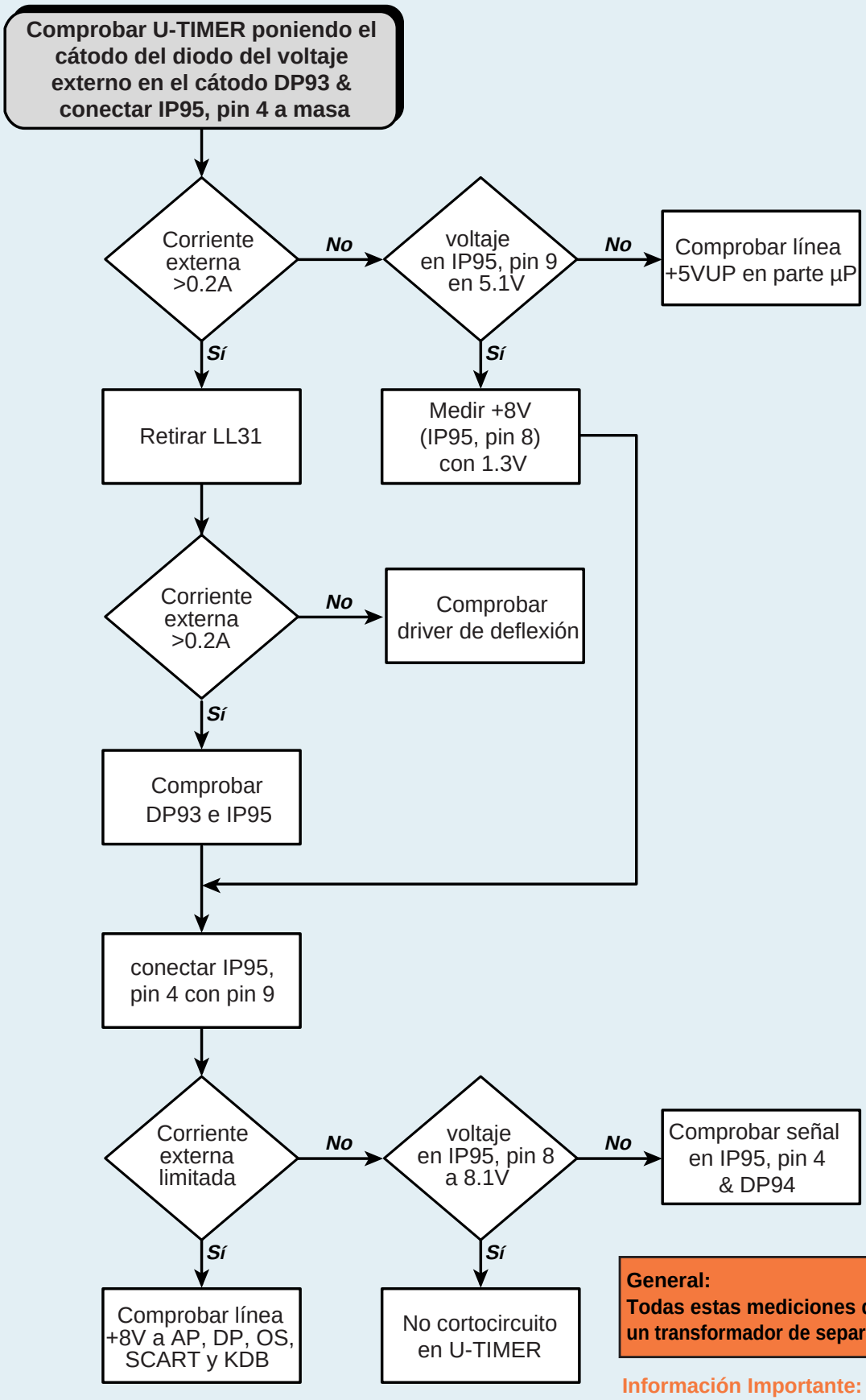


Después de acabar la comprobación,
restituya cada modificación, p. ej. JL60/LL60

General:
Todas estas mediciones deben hacerse con un transformador de separación de alimentación.

Información Importante:
Si el circuito de sobretensión estaba activado, hay que cambiar el fusible resistor en posición RB/LB06 en la placa TRC.

ALIMENTACION – LADO SECUNDARIO : U-TIMER

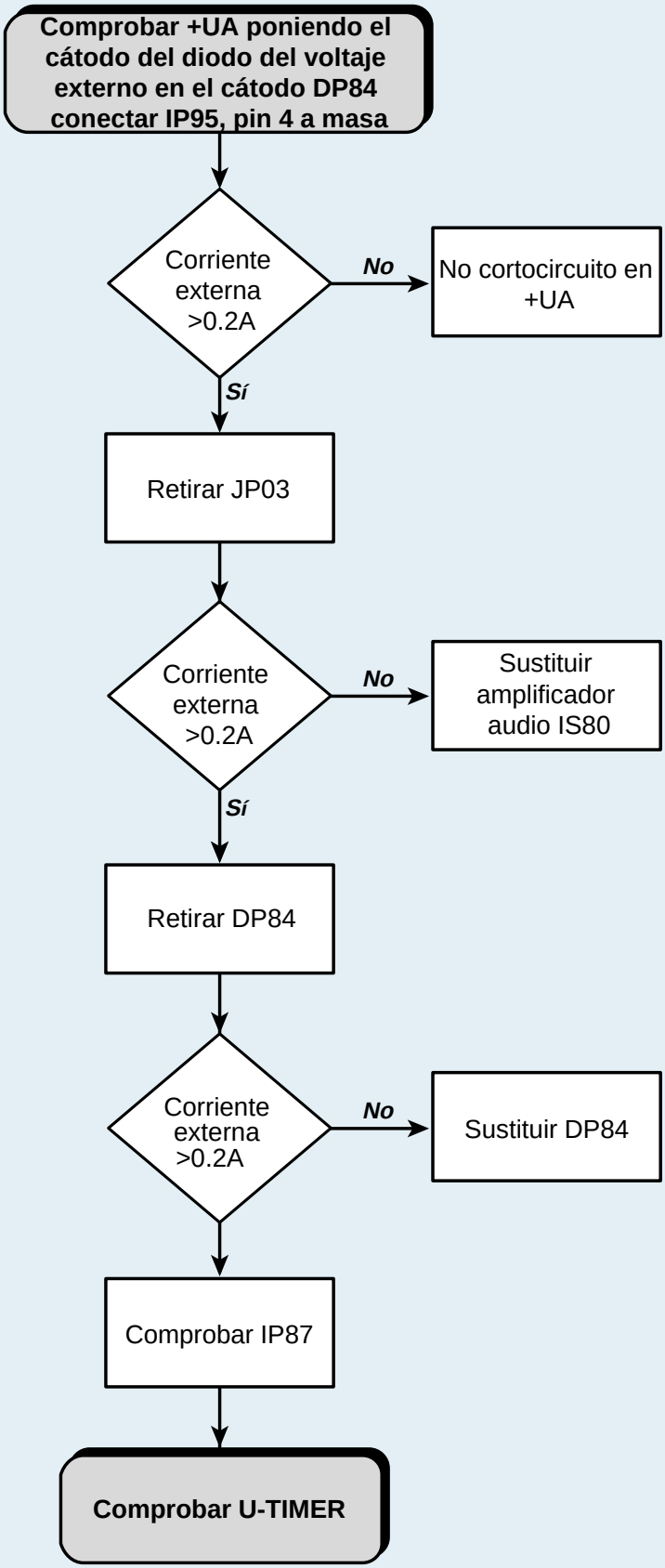

Comprobar U-TIMER poniendo el cátodo del diodo del voltaje externo en el cátodo DP93 & conectar IP95, pin 4 a masa
Corriente externa >0.2A
No
voltaje en IP95, pin 9 en 5.1V
No
Comprobar línea +5VUP en parte µP
Sí
Sí
Retirar LL31
Medir +8V (IP95, pin 8) con 1.3V
Corriente externa >0.2A
No
Comprobar driver de deflexión
Sí
Comprobar DP93 e IP95
conectar IP95, pin 4 con pin 9
Corriente externa limitada
No
voltaje en IP95, pin 8 a 8.1V
No
Comprobar señal en IP95, pin 4 & DP94
Sí
Sí
Comprobar línea +8V a AP, DP, OS, SCART y KDB
No cortocircuito en U-TIMER

Después de acabar la comprobación, restituya cada modificación, p. ej. LL31

General:
Todas estas mediciones deben hacerse con un transformador de separación de alimentación.

Información Importante:
Si el circuito de sobretensión estaba activado, hay que cambiar el fusible resistor en posición RB/LB06 en la placa TRC.

ALIMENTACION – LADO SECUNDARIO : +UA



General:
Todas estas mediciones deben hacerse con un transformador de separación de alimentación.

Información Importante:
Si el circuito de sobretensión estaba activado, hay que cambiar el fusible resistor en posición RB/LB06 en la placa TRC.

GENERAL INFORMATION

METHODOLOGY

1 - ON POWER-UP :

- Observe the behaviour of the two-coloured LED: note the various stages and compare them to the normal cycle.
By doing this, the time at which the problem arose and the part of the circuit which needs to be investigated can be identified.

2 -TROUBLE SHOOTING PROCEDURE: LED BEHAVIOUR

In certain cases the LED will flash when transmitting a message:

LED flashing : message being transmited.

Count the flashes : code is two bursts separated by a pause of 0.7 s and repeated several times.

See the error code table. → **LIST OF LED MESSAGE ERROR CODES**

This data is more precise than colour changes but still incomplete, since various causes may generate the same code.

3 - FAULT FINDING :

Carryout of stages 1 and 2: an oscilloscope test may clarify the code transmitted in stage two.

a - The television set operates fully or partially
- Use LED message observation fault finding methods 1 and 2. See also the faults listed relating to fault finding by symptom.

b - The television goes into permanent or cyclical security mode
- Observe LED's behaviour (flashing red, stable orange followed by flashing, etc.).
Select the relevant box in the column (LED behaviour fault finding).

INFORMATIONS GENERALES

METHODOLOGIE

1 - AU DEMARRAGE :

- Observer le comportement de la LED bicolore ; noter les différentes étapes et les comparer au cycle normal.
Ceci permet d'identifier le moment ou le problème apparaît et vers quelle partie du chassis s'orienter.

2 - DEMARCHE DE DEPANNAGE : COMPORTEMENT DE LA LED

Dans certains cas le voyant clignote en émettant un message :

Clignotement de la LED : Emission d'un message.
- Compter les clignotements : codés sur deux salves séparées par un temps d'arrêt de 0.7s et répétées plusieurs fois.

Se reporter au tableau de code erreur . → **LISTE DES CODES PANNES MESSAGES LED**

Ces informations sont plus précises que les changements de couleur mais pas complètes car plusieurs causes différentes peuvent générer le même code.

3 - RECHERCHE DE LA PANNE :

- Exploitation des étapes 1 et 2 : une recherche par oscilloscope s'effectue selon deux voies distinctes .

a - Le chassis se met en fonctionnement complet ou partiel :
- Utiliser les démarches 1 et 2 de recherche par observation du message émis par la LED.
Voir également les pannes concernées dans la recherche par symptomes.

b - Le chassis se met en sécurité permanente ou cyclique :
- Observer le comportement de la LED (rouge clignotant , orange stable suivi d'un clignotement ...)
Sélectionner le cas correspondant dans cette rubrique (recherche par «comportement de la LED»).

ALLGEMEINE INFORMATIONEN

VORGEHENSWEISE

1 - BEIM EINSCHALTEN

Beobachten Sie das Verhalten der 2-farbigen LED: Merken Sie sich das Einschalt- verhalten und vergleichen es mit den normalen Zyklen.
Hierdurch kann die Zeit bis der Fehlerzeitpunkt und die zu überprüfende Stufe festgestellt werden.

2 - TROUBLE SHOOTING ABLAUF: LED-VERHALTEN

In bestimmten Fällen leuchtet die LED zum Übertragen einer Fehlerinformation auf:
LED Aufleuchten: Übertragung der Fehlerinformation
Zählen der Fehlerinformation: Kodiert in zwei Impulsbündeln, unterbrochen durch 0,7 s Pause.
Dieses wiederholt sich mehrere Male.

Sehen Sie in der Fehlercodetabelle → Liste der LED Informationen Fehler-Codes

Diese Informationen sind genauer als Farbänderungen aber unvollständig, da verschiedene Ursachen denselben Code verursachen.

3 - FEHLERSUCHE

Funktionen der Stufen 1 und 2: Messungen mit dem Oszilloskop sind für die beiden separaten Vorgänge durchzuführen.

a - Das Gerät arbeitet ganz oder teilweise:
- Benutzen Sie die LED Informationen der Fehlersuchmethode 1 und 2.
Schauen Sie ebenfalls bei Fehlersuche nach Symptomen nach.

b - Das Fernsehgerät schaltet permanent oder periodisch ab:
- Beobachten Sie das LED-Verhalten (rotes Aufleuchten, konstantes orange gefolgt von Aufleuchten, usw.)
Wählen Sie das zutreffende Kästchen in der Spalte: Fehlersuche durch LED-Verhalten.

INFORMAZIONI GENERALI

METODOLOGIA

1 - DURANTE L'ACCENSIONE :

- Osservare il comportamento del LED bicolore; verificare le diverse fasi e confrontarle con il ciclo normale.
Ciò consente di identificare il momento in cui il problema si verifica e di quale parte del telaio occuparsi.

2 - RICERCA E CORREZIONE DEI GUASTI : COMPORTAMENTO DEL LED

In alcuni casi la spia luminosa lampeggia visualizzando un messaggio :

Lampeggiamento del LED: visualizzazione di un messaggio.
- Contare i lampeggiamenti: codificati su due serie separate da un tempo di arresto di 0,7 sec. e ripetuti più volte.

Riferirsi alla tabella dei codici d'errore. → **ELENCO DEI CODICI DI GUASTO MESSAGGI LED**

Queste informazioni sono più precise dei cambiamenti di colore ma non sono complete, poiché più cause diverse possono generare il medesimo codice.

3 - RICERCA DEI GUASTI :

Sfruttando le fasi 1 e 2; la ricerca mediante l'oscilloscopio viene eseguita in due modi distinti.

a - Il telaio funziona completamente o parzialmente :
- Utilizzare la sequenza 1 e 2 di ricerca osservando i messaggi visualizzati dal LED.
Vedere anche i guasti relativi nella ricerca per sintomi.

b - Il telaio entra in sicurezza permanente o ciclica :
- Osservare il comportamento del LED (rosso lampeggiante, arancione stabile seguito da un lampeggiamento...). Selezionare il caso corrispondente in questa tabella (ricerca per "comportamento del LED")

INFORMACIÓN GENERAL

PROCEDIMIENTO

1 - AL ENCENDERLO

- Observar el funcionamiento del LED: distinga las etapas y compárelas con el ciclo normal. Este procedimiento le permite identificar la etapa en la que surge el problema y la parte del chasis donde resolverlo.

2 -RESOLUCIÓN DE PROBLEMAS : FUNCIONAMIENTO DEL LED

En algunas ocasiones, el LED parpadea al emitir un mensaje :

LED parpadea: emisión del mensaje.

Cuenta de los parpadeos: codificado en dos intervalos separados por una pausa de 0.7 seg. y repetidos varias veces.

Consulte la tabla de códigos de error → **LISTA DE LOS CÓDIGOS DE ERROR DEL LED**

Estos datos son más precisos que los de color aunque incompletos, dado que varias causas distintas pueden crear el mismo código.

3 - LOCALIZACIÓN DE FALLOS :

Para las etapas 1 y 2: se realiza una localización por medio del osciloscopio de dos maneras distintas.

a - El televisor funciona completa o parcialmente
- Utilice los métodos 1 y 2 de localización por observación del mensaje emitido por el LED. Vea también otros fallos relacionadas al hacer la localización por síntomas.

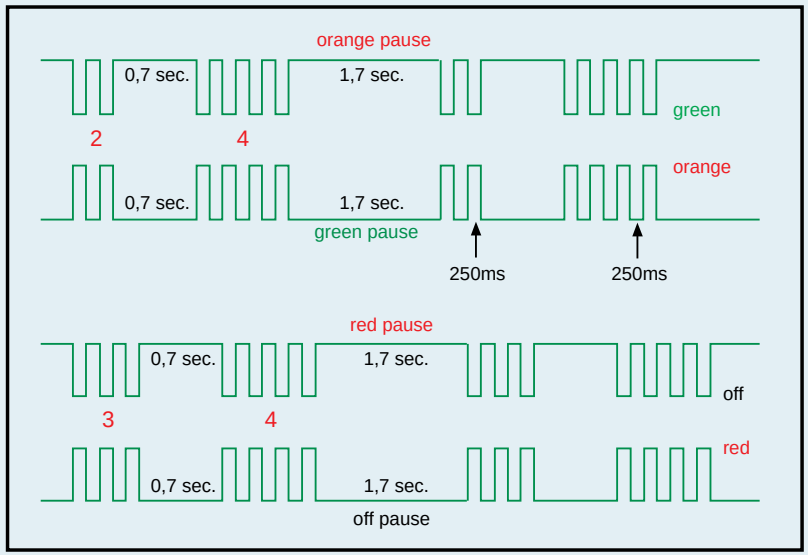
b - El televisor pasa al modo de seguridad permanente o cíclico
- Observe el funcionamiento del LED (rojo parpadeante, naranja fijo seguido de un parpadeo, etc.). Seleccione el defecto dependiente del código de error observado (localización por funcionamiento del LED).

GENERAL INFORMATION - LED BEHAVIOUR

LED FLASHES

Message transmission.
The Error codes are signalled by the TV's red LED.

Count the number of flashes : error code is two burst seperated by a pause of 0.7sec. and repeated four times..
There is 1.7 sec. between each codes sequence .



currently all known ICC17 TV sets are fitted with a Bicoloured LED, the red part is the Standby LED whilst, the green part is directly connected to the switched +8V supply. Therefore,the colour of the LED will depend upon the state of this voltage,the chart below gives the corresponding LED-colours:

	LED-port	
switched +8V	off	on
on	green	orange
off	off	red

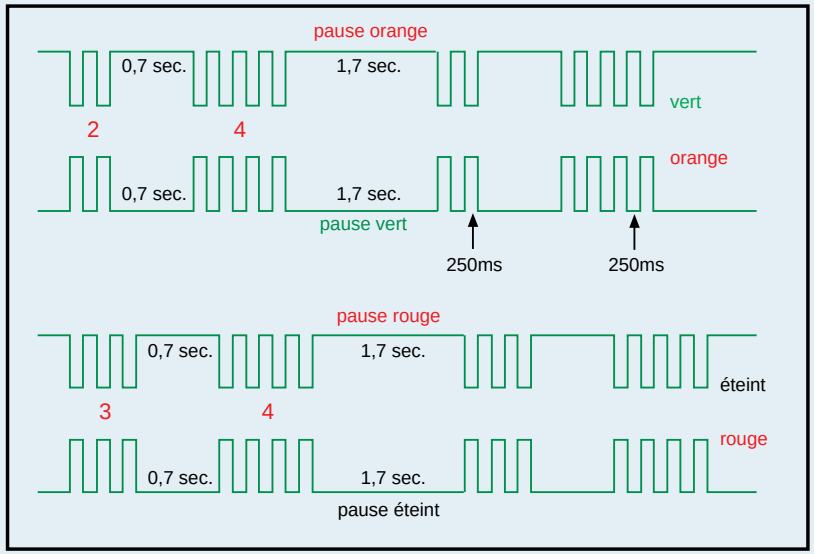
CODES	DEFAUTS
14	IC TDA8855H DOES NOT ANSWER
15	AUDIO PROCESSOR NO LONGER RESPONDING.
21	SDA LINE BEING HELD LOW
23	CLOCK JAMMED AT LOW LEVEL, SCL LINE JAMMED AT LOW LEVEL.
25	SWITCHED 5V NOT AVAILABLE
26	TUBE DOES NOT GET WARM IN TIME
27	THE DETECTION SYSTEM HAS DETECTED PROTECTION ON MORE THAN THREE OCCASIONS (DOES THIS MEAN THAT A PROBLEM HAS BEEN DETECTED ON THE BREATING LINE?).
28	SCANNING PROBLEM AFTER 2 S, THE PROGRAM TRIES TO PERFORM A START.
34	THE NVM CHIP DOES NOT ANSWER
36	WRONG NVRAM ADDRESS PASSED TO THE BUS-HANDLER
37	UNEXPECTED LEVEL ON NMI (INTERRUPT) LINE FOUND (POSSIBLE CAUSE : TUBE FLASHOVER)
41	BUS (DATA LINE) NOT RECOVERABLE

COMPORTEMENT DE LA LED - CODES PANNES

CLIGNOTEMENT DE LA LED

Emission d'un message.
Codes pannes visualisés par l'intermédiare de la LED rouge.

Ces codes sont composés de deux chiffres,séparés d'une pause de 0.7 seconde.
Ils sont répétés 4fois. Un temps de 1,7 s sépare deux codes pannes.



Dans les chassis CONNUS ICC17, une diode LED bicolore est inserée. La partie rouge de celle-ci est la LED standby tandis que la partie verte est directement connectée au +8V commuté. La couleur de cette derniere est représenté dans le tableau ci-dessous selon les valeurs ON et OFF du +8V

	LED-port	
switched +8V	off	on
on	green	orange
off	off	red

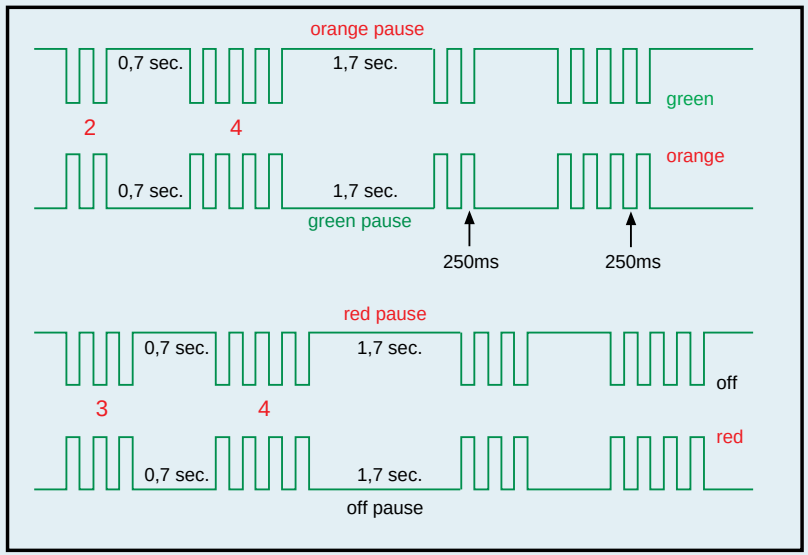
CODES	DEFAUTS
14	TDA8855H NE REPOND PLUS
15	PROCESSEUR AUDIO NE REPOND PLUS
21	LIGNE SDA AU NIVEAU BAS
23	CLOCK AU NIVEAU BAS, LIGNE SCL AU NIVEAU BAS
25	5V COMMUTE N'EST PAS DISPONIBLE
26	LE TUBE NE CHAUFFE PAS À TEMPTS
27	MODULE AUDIO NON DETECTE
28	PROBLEME DE BALAYAGE A MOIN DE 2S LE PRO GRAMME ESSAYE DE FAIRE UN DEMARRAGE
34	PROBLEME NVM, MEMOIRE NE REPOND PLUS
36	ADRESSE NVM NON TROUVEE
37	PROBLEME DETECTE SUR LA LINE "INT" PENDANT LE DEMARRAGE OU LE FONCTIONNEMENT DU TV"ARKING"
41	I2C BUS DATA RESTE BLOQUE

ALLGEMEINE INFORMATIONEN - LED VERHALTEN

LED BLINKZEICHEN

Übermittlung von Informationen
Die Fehler-Codes werden von der roten LED angezeigt.

Zählen Sie die Leuchtimpulse: Sie werden in zwei Blinkfolgen, abgetrennt durch eine Pause von 0,7 sek., Sie werden fünf Mal wiederholt. Zwischen jeweils zwei Codes ist eine Pause von 1,7 sek.



DIm CONNUS ICC17 Rahmen ist eine Zwei-Farben-LED eingebaut: Die rote Anzeige ist im Stand-By aktiviert, die grüne Anzeige bedeutet, daß die 8V- Stromversorgung eingeschaltet ist. Die Farbe der grünen LED ist in der Tabelle unten entsprechend der Ein- und Ausschaltwerte der 8V Stromversorgung aufgeführt.

	LED-port	
switched +8V	off	on
on	green	orange
off	off	red

CODES	FEHLER
14	IC TDA8855H ANTWORTET NICHT
15	AUDIOPROZESSOR SPRICHT NICHT MEHR AN
21	BUS DATA LINE IST AUF LOW
23	DER CLOCK-IMPULS HÄNGT AM L-PEGEL FEST, SCL-LINE HÄNGT AM UNTEREN PEGEL FEST
25	GESCHALTETE 5V NICHT VORHANDEN
26	RÖHRE WIRD NICHT RECHTZEITIG WARM
27	DAS SCHUTZSCHALTUNGSSYSTEM HAT MEHR ALS DREI STÖRFÄLLE ENTDECKT. (KÖNNTE ES SEIN, DAß ES EIN PROBLEM IN DER BREATING-VERBINDUNG GIBT?)
28	ABTASTPROBLEM NACH 2 SEK. DAS PROGRAMM VERSUCHT EINEN NEUSTART.
34	NVM CHIP ANTWORTET NICHT
36	DIE ADRESSE DES NVM WURDE NICHT GEFUNDEN.
37	UNERWARTETER ZUSTAND AN NMI (INTERRUPT) LINE GEFUNDEN. (MÖGLICHE URSACHE = RÖHREN-ÜBERSCHLAG")
41	BUS (DATA LINE) NICHT MÖGLICH ZU REAKTIVIEREN

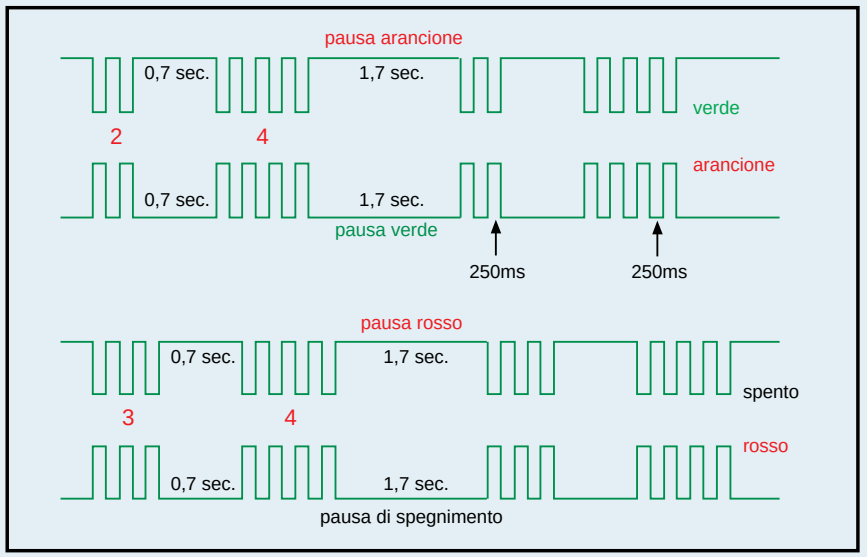
INFORMAZIONI GENERALI - COMPORTAMENTO DEL LED

LAMPEGGI LED : Trasmissione messaggi.

I codici errore vengono indicati dal diodo LED rosso del TV.

Contare i lampeggi: codificati in due gruppi di impulsi separati da una pausa di 0,7 secondi, sono ripetuti 4 volte.

I due pacchetti di impulsi sono distanziati di 1,7 secondi.



Nel telaio CONNUS ICC17, un diodo LED bicolore è inserito.
La parte rossa del diodo è il LED attesa invece la parte verde è direttamente collegata al +8V commutato. Il colore di questíultima è rappresentato nella tavola qui sotto secondo i valori ON e OFF di +8V

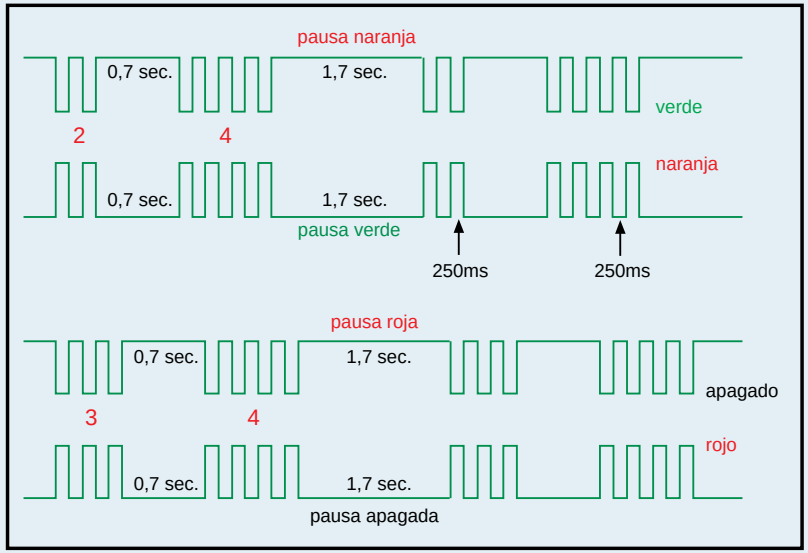
	LED-port	
switched +8V	off	on
on	green	orange
off	off	red

CODICE	PROBLEMA
14	TDA8855H NON RISPONDE
15	PROCESSORE AUDIO NON RISPONDE PIŸ.
21	LINEA SDA FORZATA BASSA
23	CLOCK BLOCCATO AL LIVELLO BASSO, LINEA TERRA BLOCCATA AL LIVELLO BASSO
25	LA TENSIONE 5V COMMUTATI NON DISPONIBILE
26	IL TUBO NON RAGGIUNGE LA CORRETTA TEMPERATURA NEL TEMPO STABILITO.
27	PIŸ DI 3 VOLTE LA RILEVAZIONE HA SCOPERTO UNA ìPROTEZIONEÎ (CIO» Cí» UN PROBLEMA SCOPERTO SULLA LINEA ìBREATINGî?).
28	PROBLEMA DI SCANSIONE DOPO 2S, IL PROGRAMMA PROVA A FARE UN AVVIO.
34	IL CHIP NVM NON RISPONDE
36	INDIRIZZO NVM NON TROVATO.
37	LIVELLO IMPREVISTO SULLA LINEA NMI
41	BUS I2C (LINEA DATI) NON RIPRISTINABILE

FUNCIONAMIENTO DEL LED - CÓDIGOS DE AVERÍAS

PARPADEO DEL LED

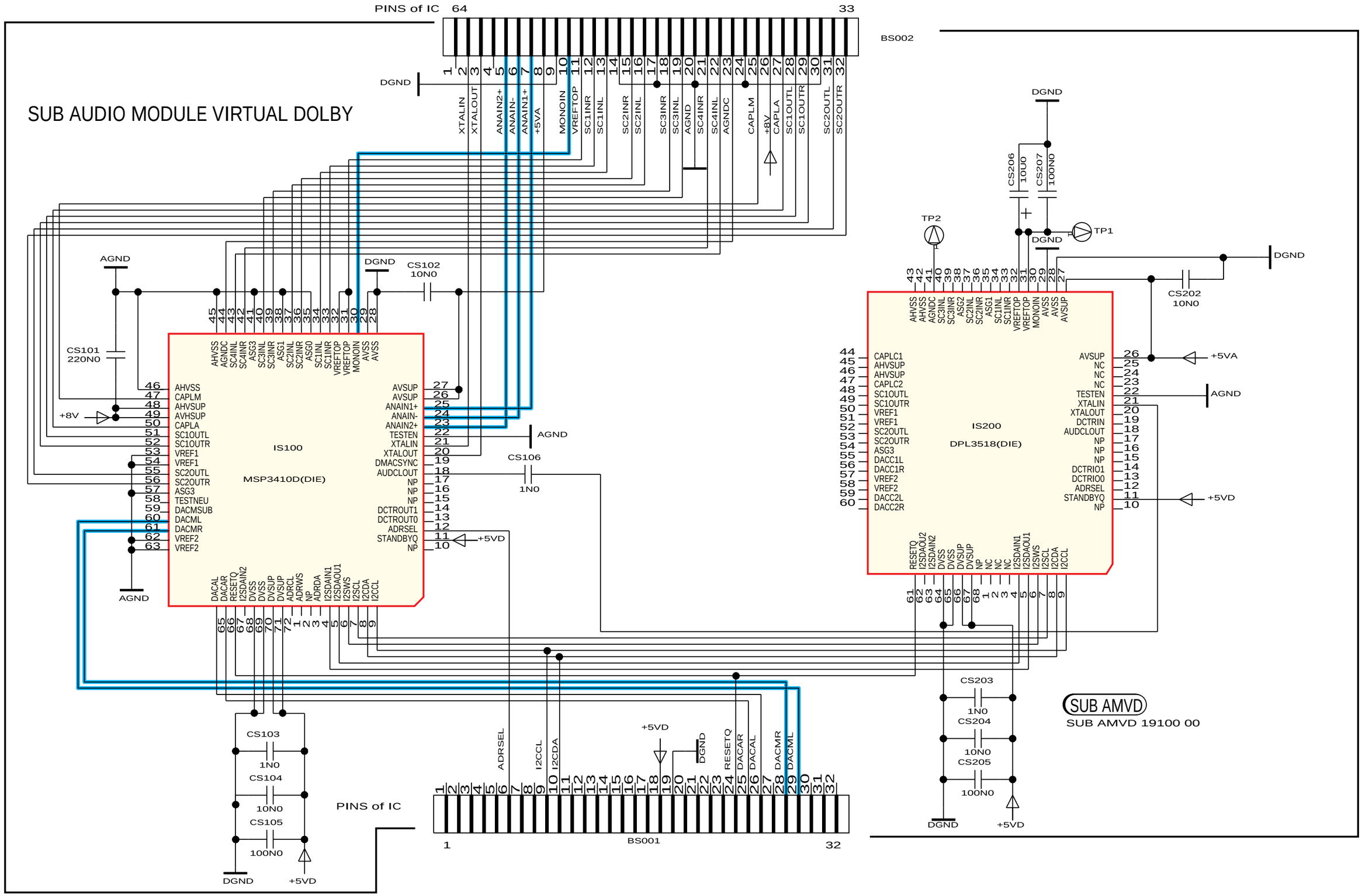
Emisión de un mensaje.
Códigos averias visualizados por el LED roja.
Contar los parpadeos, clasificados en dos intervalos separados por un tiempo de parada de 0,7 seg.
Se repiten 4 veces.
Un tiempo de 1.7s separa dos códigos averias.



En los chasis ICC17, está insertado un diodo LED bicolor.
La parte roja es el LED standby mientras que la parte verde está directamente conectada con el +8V conmutado. El color de esta última está representado en el cuadro indicado a continuación según los valores ON y OFF del +8V

	LED-port	
switched +8V	off	on
on	green	orange
off	off	red

CÓDIGOS	DEFECTOS
14	CIR. INTEGRADO DE VIDEO TDA8855H NO RESPONDE
15	EL PROCESADOR AUDIO NO RESPONDE.
21	DATA DEL BUS I2C PERMANECE EN BAJO
23	CLOCK BLOQUEADO EN NIVEL BAJO, LÍNEA SCL BLOQUEADA EN NIVEL BAJO
25	NO SE DISPONE DE LOS “5v CONMUTADOS”
26	EL TUBO TARDA EN CALENTARSE
27	LA PROTECCIÓN DE LA DEFLEXIÓN ACTÚA MAS DE 3 VECES (EL PROBLEMA SE DETECTA EN LA LÍNEA DE “BREATING”)
28	PROBLEMA DE BARRIDO. DESPUÉS DE 2s, INTENTA ARRANCAR DE NUEVO
34	LA MEMORIA NO VOLÁTIL X24C32 NO RESPONDE
36	DIRECCIÓN NVM NO LOCALIZADA.
37	PROBLEMA DETECTADO EN LA LÍNEA “Interrupt”DURANTE EL ARRANQUE O EL FUNCIONAMIENTO DEL TV. POSIBILIDAD DE CHISPAZOS EN MUY ALTA?
41	DATA DEL BUS I2C PERMANECE BLOQUEADO


SUB AUDIO MODULE VIRTUAL DOLBY
PINS of IC 64
33
BS002
DGND
XTALIN
XTALOUT
ANAIN2+
ANAIN-
ANAIN1+
+5VA
MONOIN
VREFTOP
SC1INR
SC1INL
SC2INR
SC2INL
SC3INR
SC3INL
AGND
SC4INR
SC4INL
AGNDC
CAPLM
+8V
CAPLA
SC1OUTL
SC1OUTR
SC2OUTL
SC2OUTR
CS206
10U0
CS207
100N0
TP2
TP1
CS102
10N0
CS202
10N0
CS101
220N0
+8V
IS100
MSP3410D(DIE)
AHVSS
CAPLM
AHVSUP
AVHSUP
CAPLA
SC1OUTL
SC1OUTR
VREF1
VREF1
SC2OUTL
SC2OUTR
ASG3
TESTNEU
DACMSUB
DACML
DACMR
VREF2
VREF2
AVSUP
AVSUP
ANAIN1+
ANAIN-
ANAIN2+
TESTEN
XTALIN
XTALOUT
DMACSYNC
AUDCLOUT
NP
NP
NP
DCTROUT1
DCTROUT0
ADRSEL
STANDBYQ
NP
CS106
1N0
+5VD
IS200
DPL3518(DIE)
CAPLC1
AHVSUP
AHVSUP
CAPLC2
SC1OUTL
SC1OUTR
VREF1
VREF1
SC2OUTL
SC2OUTR
ASG3
DACC1L
DACC1R
VREF2
VREF2
DACC2L
DACC2R
AVSUP
NC
NC
NC
TESTEN
XTALIN
XTALOUT
DCTRIN
AUDCLOUT
NP
NP
NP
DCTRIO1
DCTRIO0
ADRSEL
STANDBYQ
NP
+5VA
AGND
+5VD
CS103
1N0
CS104
10N0
CS105
100N0
CS203
1N0
CS204
10N0
CS205
100N0
PINS of IC
BS001
1
32
ADRSEL
I2CCL
I2CDA
RESETQ
DACAR
DACAL
DACMR
DACML
SUB AMVD
SUB AMVD 19100 00

POWER SUPPLY - ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

(5) : standby

Note :
During measurements in the power supply unit
- Use the primary power unit ground (PGND).

Attention :
Mesure dans le bloc alimentation
- Utiliser la masse du bloc alimentation (PGND).

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden (PGND).

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario (PGND).

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion (PGND).

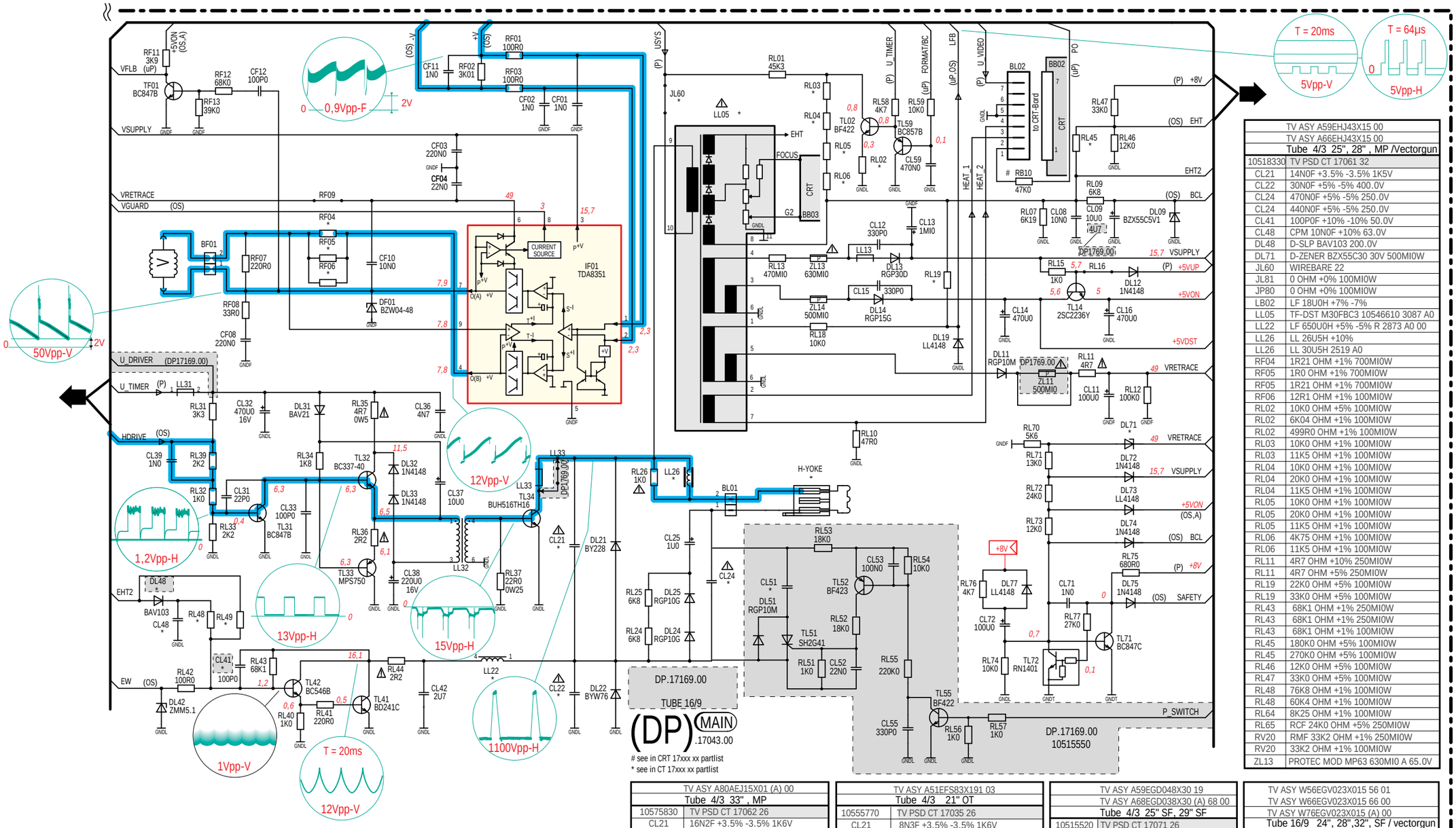
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

MAIN (PP)17900

Tube	Format	Usys	Jumper	RL65
A51EFS83X191	4:3	126V	JL80	4k7
A59EHJ43X15	4:3	132V	JL81	24k
A66EHJ43X15	4:3	132V	JL81	24k
A59EGD048X30	4:3	126V	JL80	4k7
A68EGD038X30	4:3	126V	JL80	4k7
A68AGA25X01	4:3	126V	JL80	4k7
A80AEJ15X01	4:3	126V	JL80	4k7
W56EGV023X015	16:9	138V	JL82	47k
W66EGV023X015	16:9	138V	JL82	47k
W76EGV023X015	16:9	138V	JL82	47k

⚠ Use isolating mains transformer - Utiliser un transformateur isolateur du secteur -Einen Trenntrafo verwenden
Utilizar un transformador aislador de red - Utilizzare un trasformatore per isolarvi dalla rete

SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE



TV ASY A59EHJ43X15 00	
TV ASY A66EHJ43X15 00	
Tube 4/3 25", 28" , MP /Vectorgun	
10518330	TV PSD CT 17061 32
CL21	14N0F +3.5% -3.5% 1K5V
CL22	30N0F +5% -5% 400.0V
CL24	470N0F +5% -5% 250.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	CPM 10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL81	0 OHM +0% 100MI0W
JP80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10546610 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
LL26	LL 30U5H 2519 A0
RF04	1R21 OHM +1% 700MI0W
RF05	1R0 OHM +1% 700MI0W
RF05	1R21 OHM +1% 700MI0W
RF06	12R1 OHM +1% 100MI0W
RL02	10K0 OHM +5% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL02	499R0 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL03	11K5 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL04	20K0 OHM +1% 100MI0W
RL04	11K5 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL05	20K0 OHM +1% 100MI0W
RL05	11K5 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL06	11K5 OHM +1% 100MI0W
RL11	4R7 OHM +10% 250MI0W
RL11	4R7 OHM +5% 250MI0W
RL19	22K0 OHM +5% 100MI0W
RL19	33K0 OHM +5% 100MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL45	270K0 OHM +5% 100MI0W
RL46	12K0 OHM +5% 100MI0W
RL47	33K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL48	60K4 OHM +1% 100MI0W
RL64	8K25 OHM +1% 100MI0W
RL65	RCF 24K0 OHM +5% 250MI0W
RV20	RMF 33K2 OHM +1% 250MI0W
RV20	33K2 OHM +1% 100MI0W
ZL13	PROTEC MOD MP63 630MI0 A 65.0V

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil.
Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) durch nicht normgerechte Teile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (contrassegnati con il segno ⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio.
In tal caso é “esclusa la responsabilità” del costruttore.

La subtitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato.
En ese caso, el fabricante cesa de ser responsable.

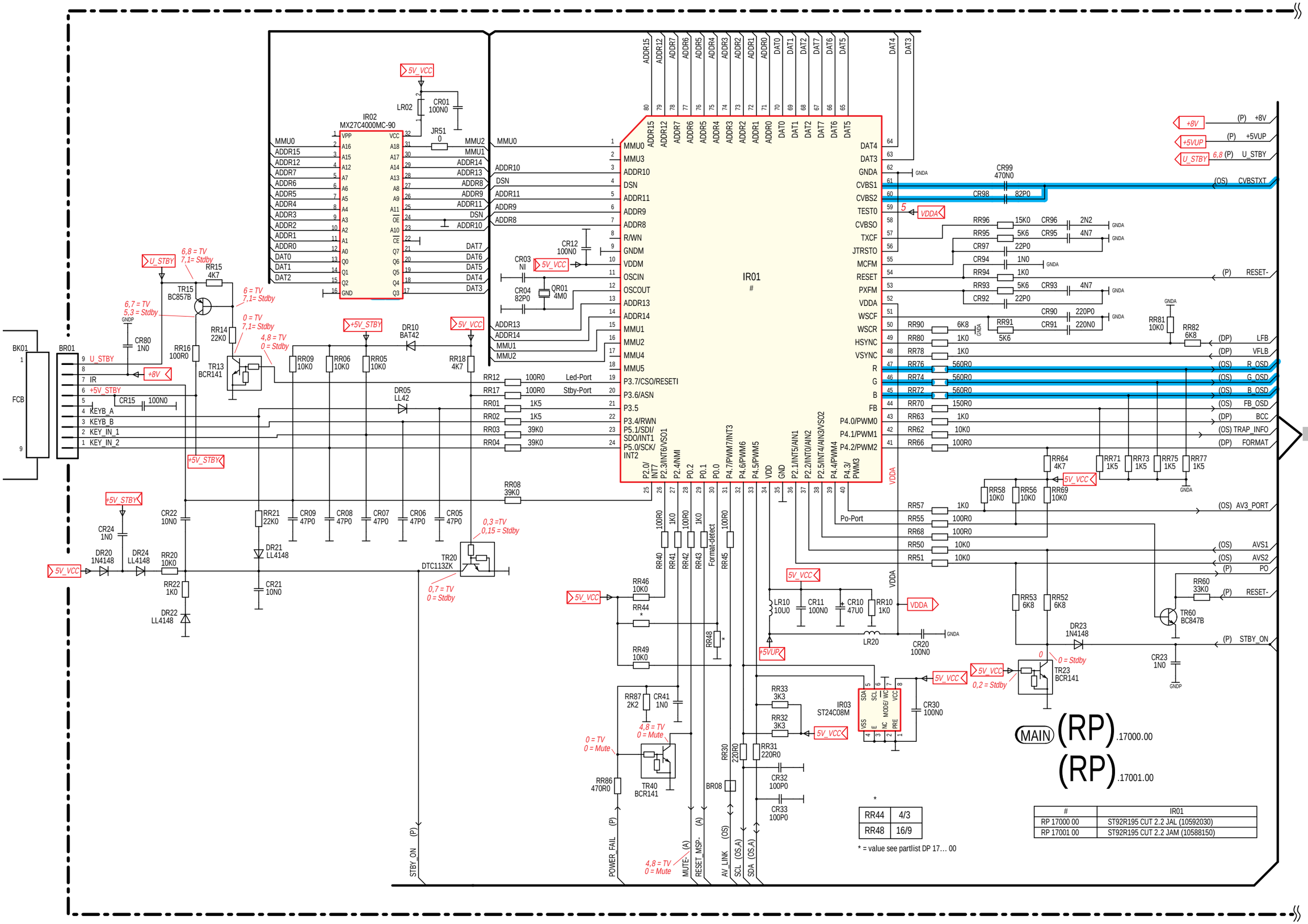
TV ASY A80AEJ15X01 (A) 00	
Tube 4/3 33" , MP	
10575830	TV PSD CT 17062 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	560N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 11
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
RF05	1R21 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	6K81 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	150K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL49	560K0 OHM +5% 100MI0W
RL65	RCF 4K7 OHM +5% 250MI0W
RV20	RMF 23K7 OHM +1% 250MI0W

TV ASY A51EFS83X191 03	
Tube 4/3 21" OT	
10555770	TV PSD CT 17035 26
CL21	8N3F +3.5% -3.5% 1K6V
CL22	33N0F +5% -5% 1K0V
CL24	440N0F +5% -5% 250.0V
CL41	1N0F +10% -10% 50.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10555640 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 85U0H 2519 A0
RF05	1R5 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL06	3K32 OHM +1% 100MI0W
RL45	110K0 OHM +5% 100MI0W
RL49	60K4 OHM +1% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	23K7 OHM +1% 250MI0W

TV ASY A59EGD048X30 19 TV ASY A68EGD038X30 (A) 68 00	
Tube 4/3 25" SF, 29" SF	
10515520	TV PSD CT 17071 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	510N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 13
LL22	LF 650U0H +5% -5%
LL26	LL 26U5H +10%
RF05	RMF 1R0 OHM +1% 700MI0W
RL02	6K8 OHM +5% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL19	15K0 OHM +5% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL48	100K0 OHM +5% 100MI0W
RL49	300K0 OHM +5% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	33K2 OHM +1% 250MI0W

TV ASY W56EGV023X015 56 01 TV ASY W66EGV023X015 66 00 TV ASY W76EGV023X015 (A) 00	
Tube 16/9 24", 28",32", SF / vectorgun	
10515530	TV PSD CT 17083 38
CL21	15N5F +3.5% -3.5% 1K6V
CL22	27N0F +5% -5% 400.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	100N0F +5% 63.0V
CL51	290N0F +5% -5% 250.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL82	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 15314460 10
LL22	LF 650U0H +5% -5%
LL26	LL 30U5H 2519 A0
RF05	1R21 OHM +1% 700MI0W
RL02	4K99 OHM +1% 100MI0W
RL03	6K49 OHM +1% 100MI0W
RL04	6K49 OHM +1% 100MI0W
RL05	6K49 OHM +1% 100MI0W
RL06	2K37 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	390K0 OHM +5% 100MI0W
RL48	220K0 OHM +5% 100MI0W
RL49	180K0 OHM +5% 100MI0W
RL65	47K0 OHM +5% 250MI0W
RV20	100K0 OHM +1% 250MI0W

CONTROL MICROPROCESSOR - MICROPROCESSEUR DE COMMANDE - MIKROPROZESSOR - MICROPROCESSORE DEI COMANDI - MICROPROCESADOR DE LOS MANDOS



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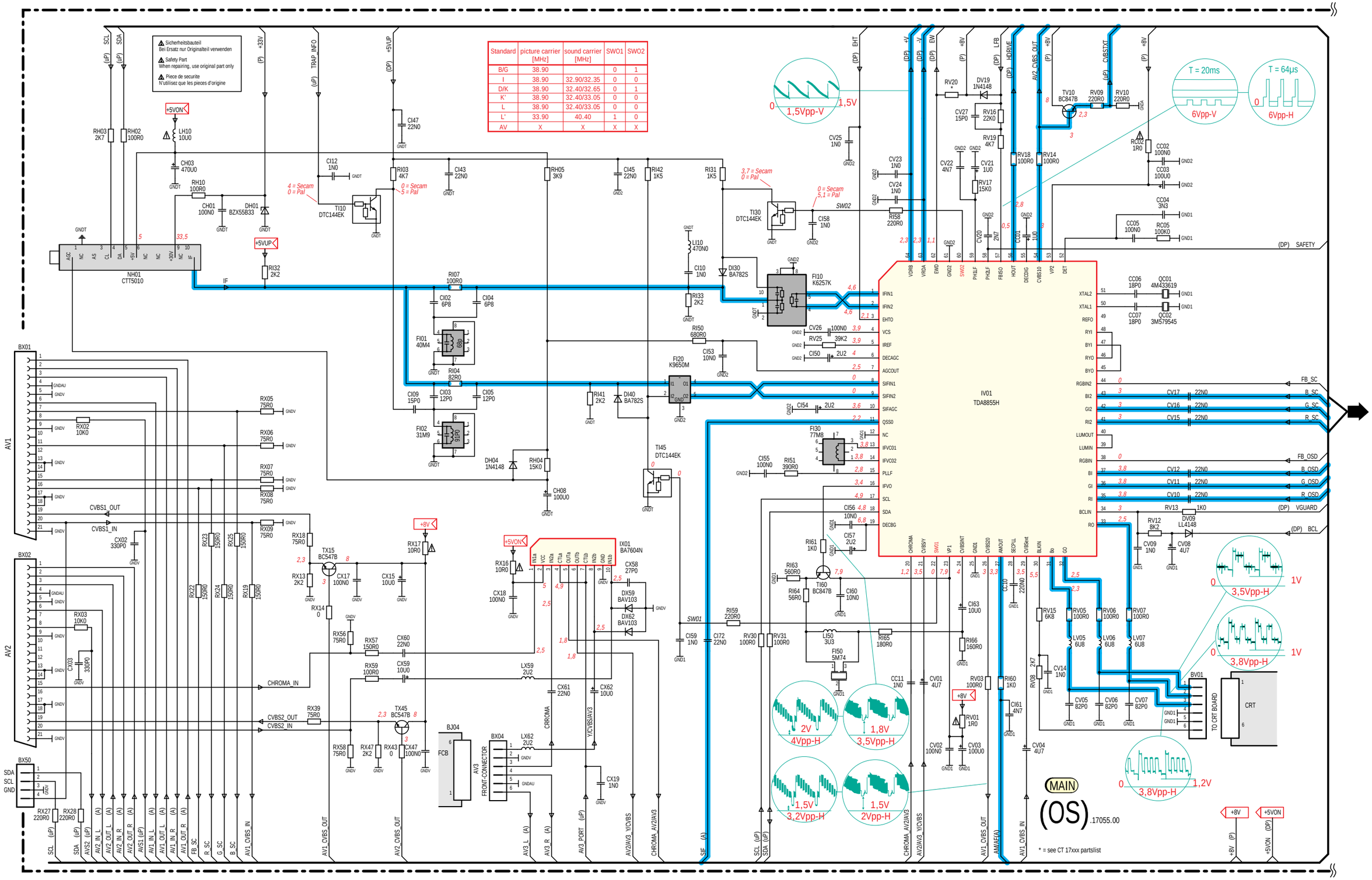
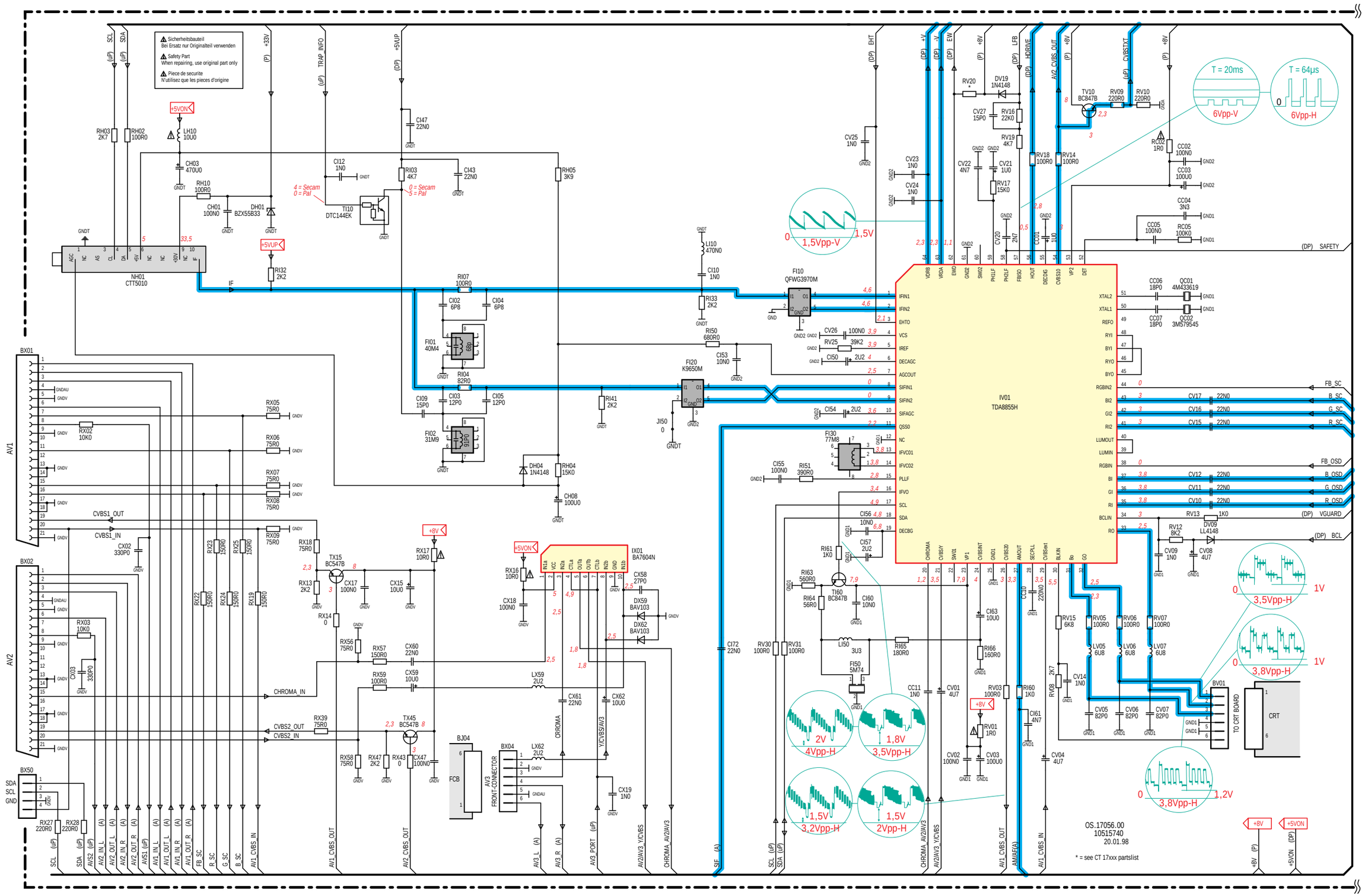
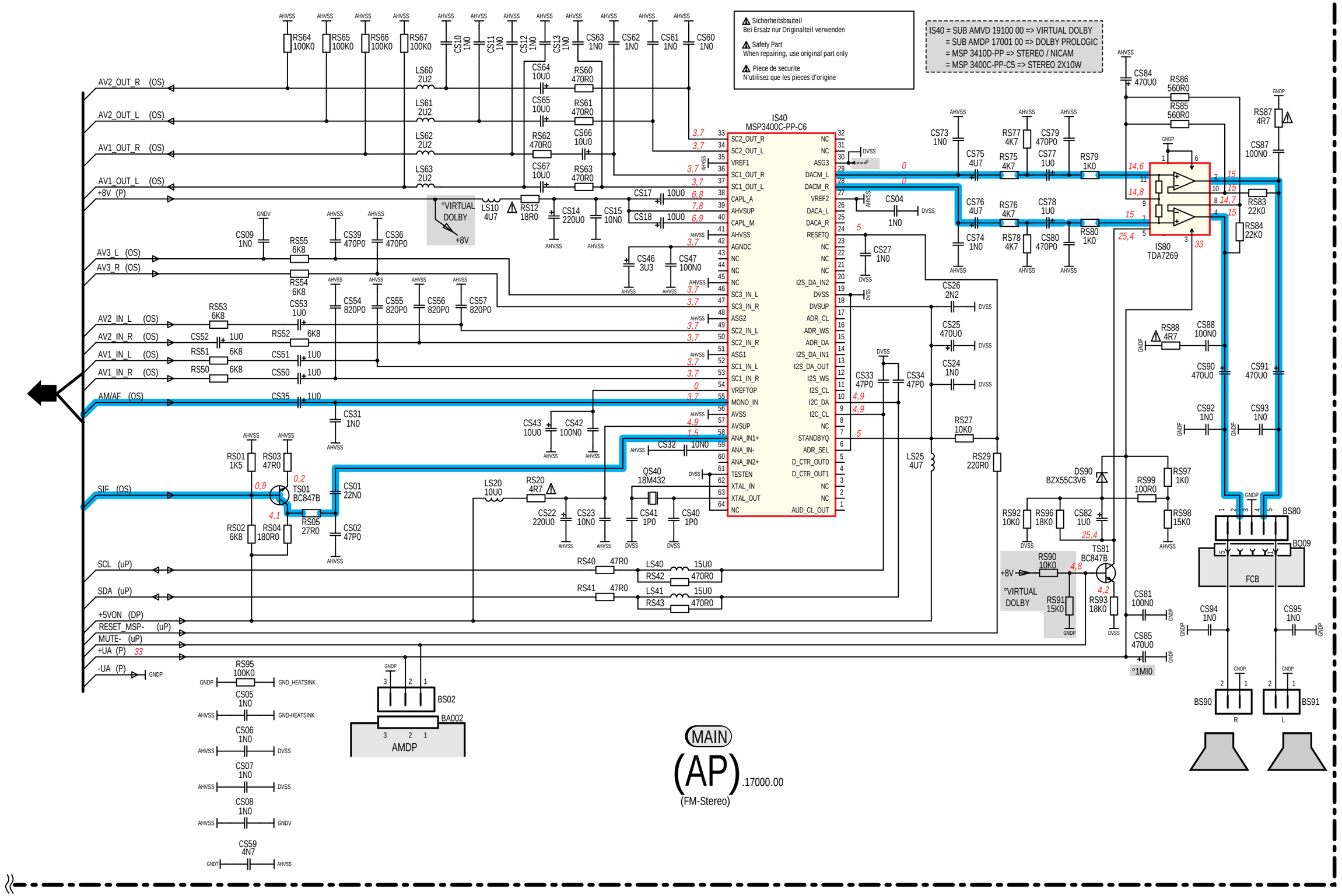
RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR / TRATAMENTO VIDEO



RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR/TRATAMENTO VIDEO

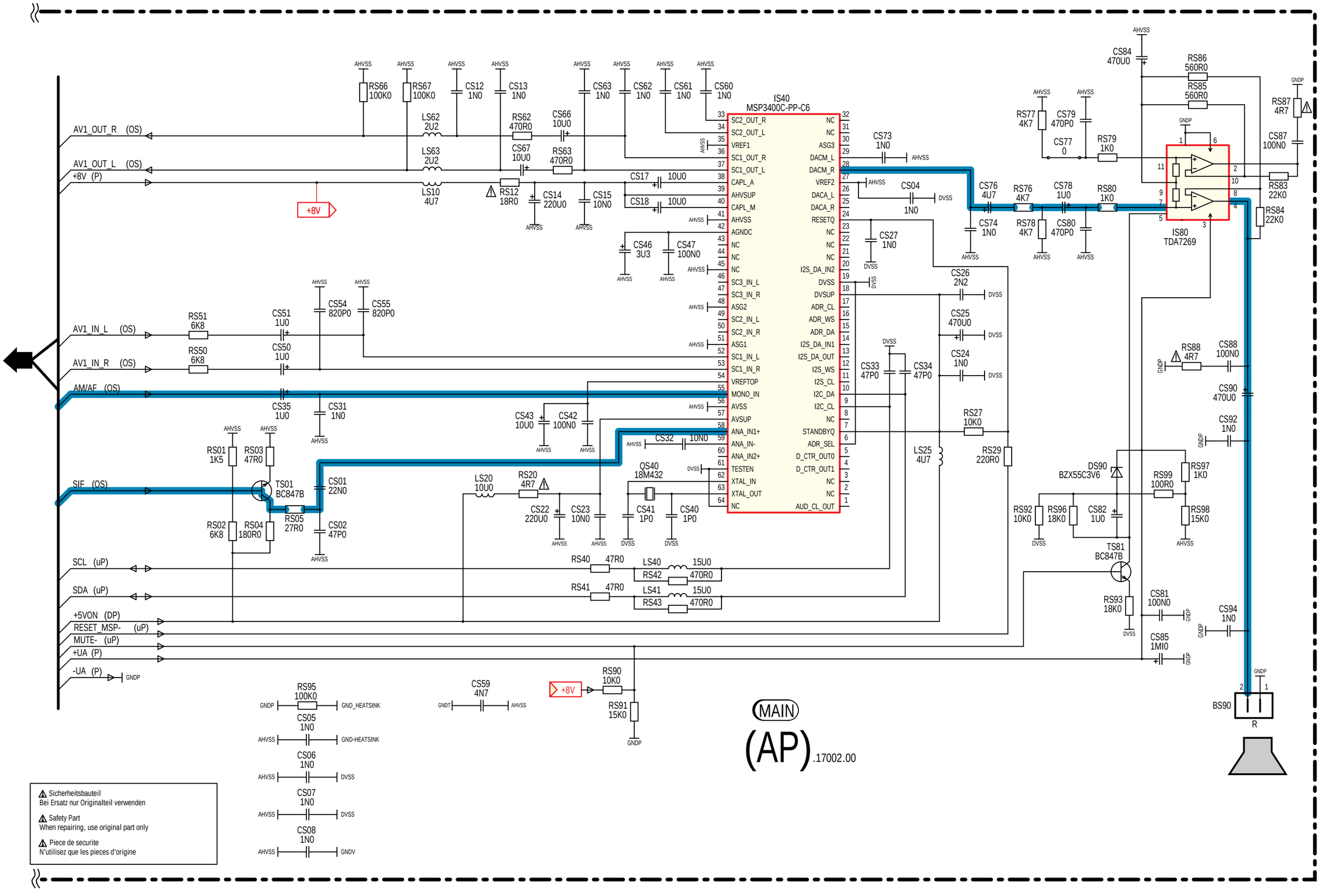


AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE ESQUEMA DEL AMPLIFICADOR
(STEREO)



ICC17
First issue 07 / 98

AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE - ESQUEMA DEL AMPLIFICADOR
(MONO)



POWER SUPPLY - ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

(5) : standby

Note :
During measurements in the power supply unit
- Use the primary power unit ground (PGND).

Attention :
Mesure dans le bloc alimentation
- Utiliser la masse du bloc alimentation (PGND).

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden (PGND).

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario (PGND).

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion (PGND).

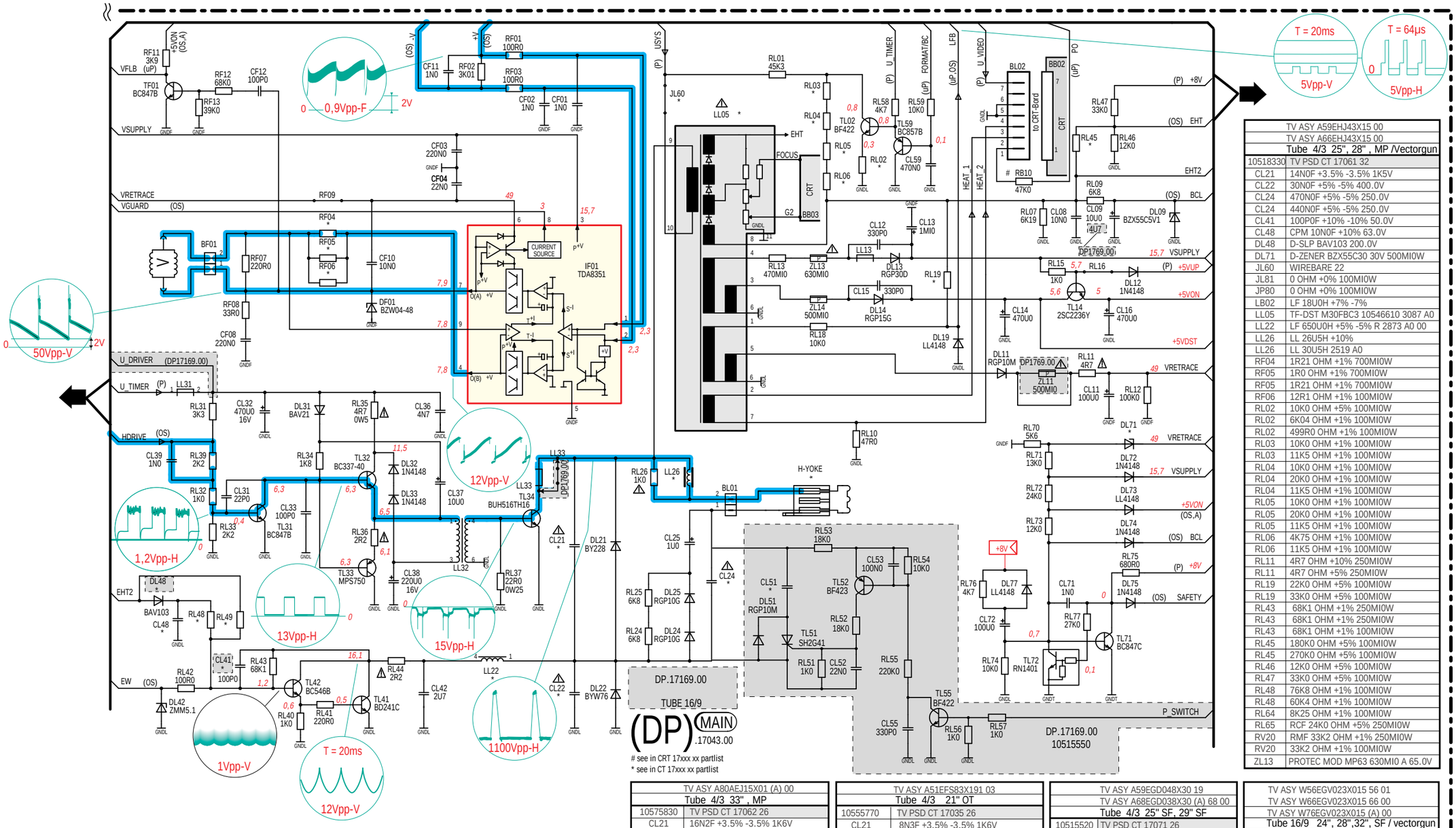
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

MAIN (PP)17900

Tube	Format	Usys	Jumper	RL65
A51EFS83X191	4:3	126V	JL80	4k7
A59EHJ43X15	4:3	132V	JL81	24k
A66EHJ43X15	4:3	132V	JL81	24k
A59EGD048X30	4:3	126V	JL80	4k7
A68EGD038X30	4:3	126V	JL80	4k7
A68AGA25X01	4:3	126V	JL80	4k7
A80AEJ15X01	4:3	126V	JL80	4k7
W56EGV023X015	16:9	138V	JL82	47k
W66EGV023X015	16:9	138V	JL82	47k
W76EGV023X015	16:9	138V	JL82	47k

⚠ Use isolating mains transformer - Utiliser un transformateur isolateur du secteur -Einen Trenntrafo verwenden
Utilizar un transformador aislador de red - Utilizzare un trasformatore per isolarvi dalla rete

SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE



TV ASY A59EHJ43X15 00	
TV ASY A66EHJ43X15 00	
Tube 4/3 25", 28" , MP /Vectorgun	
10518330	TV PSD CT 17061 32
CL21	14N0F +3.5% -3.5% 1K5V
CL22	30N0F +5% -5% 400.0V
CL24	470N0F +5% -5% 250.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	CPM 10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL81	0 OHM +0% 100MI0W
JP80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10546610 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
LL26	LL 30U5H 2519 A0
RF04	1R21 OHM +1% 700MI0W
RF05	1R0 OHM +1% 700MI0W
RF05	1R21 OHM +1% 700MI0W
RF06	12R1 OHM +1% 100MI0W
RL02	10K0 OHM +5% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL02	499R0 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL03	11K5 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL04	20K0 OHM +1% 100MI0W
RL04	11K5 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL05	20K0 OHM +1% 100MI0W
RL05	11K5 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL06	11K5 OHM +1% 100MI0W
RL11	4R7 OHM +10% 250MI0W
RL11	4R7 OHM +5% 250MI0W
RL19	22K0 OHM +5% 100MI0W
RL19	33K0 OHM +5% 100MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL45	270K0 OHM +5% 100MI0W
RL46	12K0 OHM +5% 100MI0W
RL47	33K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL48	60K4 OHM +1% 100MI0W
RL64	8K25 OHM +1% 100MI0W
RL65	RCF 24K0 OHM +5% 250MI0W
RV20	RMF 33K2 OHM +1% 250MI0W
RV20	33K2 OHM +1% 100MI0W
ZL13	PROTEC MOD MP63 630MI0 A 65.0V

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil.
Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) durch nicht normgerechte Teile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (contrassegnati con il segno ⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio.
In tal caso é “esclusa la responsabilità” del costruttore.

La subtitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato.
En ese caso, el fabricante cesa de ser responsable.

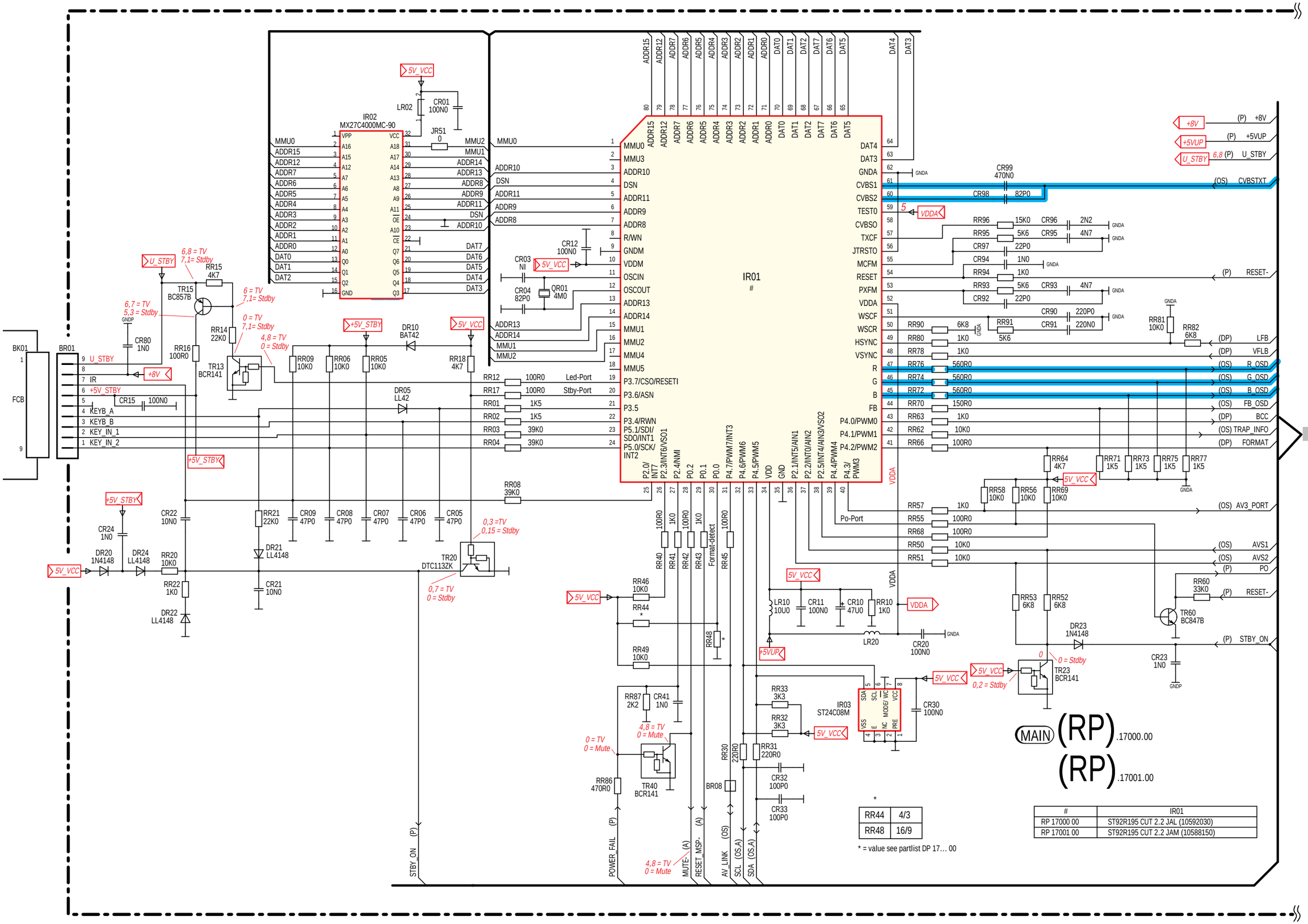
TV ASY A80AEJ15X01 (A) 00	
Tube 4/3 33" , MP	
10575830	TV PSD CT 17062 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	560N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 11
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
RF05	1R21 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	6K81 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	150K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL49	560K0 OHM +5% 100MI0W
RL65	RCF 4K7 OHM +5% 250MI0W
RV20	RMF 23K7 OHM +1% 250MI0W

TV ASY A51EFS83X191 03	
Tube 4/3 21" OT	
10555770	TV PSD CT 17035 26
CL21	8N3F +3.5% -3.5% 1K6V
CL22	33N0F +5% -5% 1K0V
CL24	440N0F +5% -5% 250.0V
CL41	1N0F +10% -10% 50.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10555640 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 85U0H 2519 A0
RF05	1R5 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL06	3K32 OHM +1% 100MI0W
RL45	110K0 OHM +5% 100MI0W
RL49	60K4 OHM +1% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	23K7 OHM +1% 250MI0W

TV ASY A59EGD048X30 19 TV ASY A68EGD038X30 (A) 68 00	
Tube 4/3 25" SF, 29" SF	
10515520	TV PSD CT 17071 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	510N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 13
LL22	LF 650U0H +5% -5%
LL26	LL 26U5H +10%
RF05	RMF 1R0 OHM +1% 700MI0W
RL02	6K8 OHM +5% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL19	15K0 OHM +5% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL48	100K0 OHM +5% 100MI0W
RL49	300K0 OHM +5% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	33K2 OHM +1% 250MI0W

TV ASY W56EGV023X015 56 01 TV ASY W66EGV023X015 66 00 TV ASY W76EGV023X015 (A) 00	
Tube 16/9 24", 28",32", SF / vectorgun	
10515530	TV PSD CT 17083 38
CL21	15N5F +3.5% -3.5% 1K6V
CL22	27N0F +5% -5% 400.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	100N0F +5% 63.0V
CL51	290N0F +5% -5% 250.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL82	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 15314460 10
LL22	LF 650U0H +5% -5%
LL26	LL 30U5H 2519 A0
RF05	1R21 OHM +1% 700MI0W
RL02	4K99 OHM +1% 100MI0W
RL03	6K49 OHM +1% 100MI0W
RL04	6K49 OHM +1% 100MI0W
RL05	6K49 OHM +1% 100MI0W
RL06	2K37 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	390K0 OHM +5% 100MI0W
RL48	220K0 OHM +5% 100MI0W
RL49	180K0 OHM +5% 100MI0W
RL65	47K0 OHM +5% 250MI0W
RV20	100K0 OHM +1% 250MI0W

CONTROL MICROPROCESSOR - MICROPROCESSEUR DE COMMANDE - MIKROPROZESSOR - MICROPROCESSORE DEI COMANDI - MICROPROCESADOR DE LOS MANDOS



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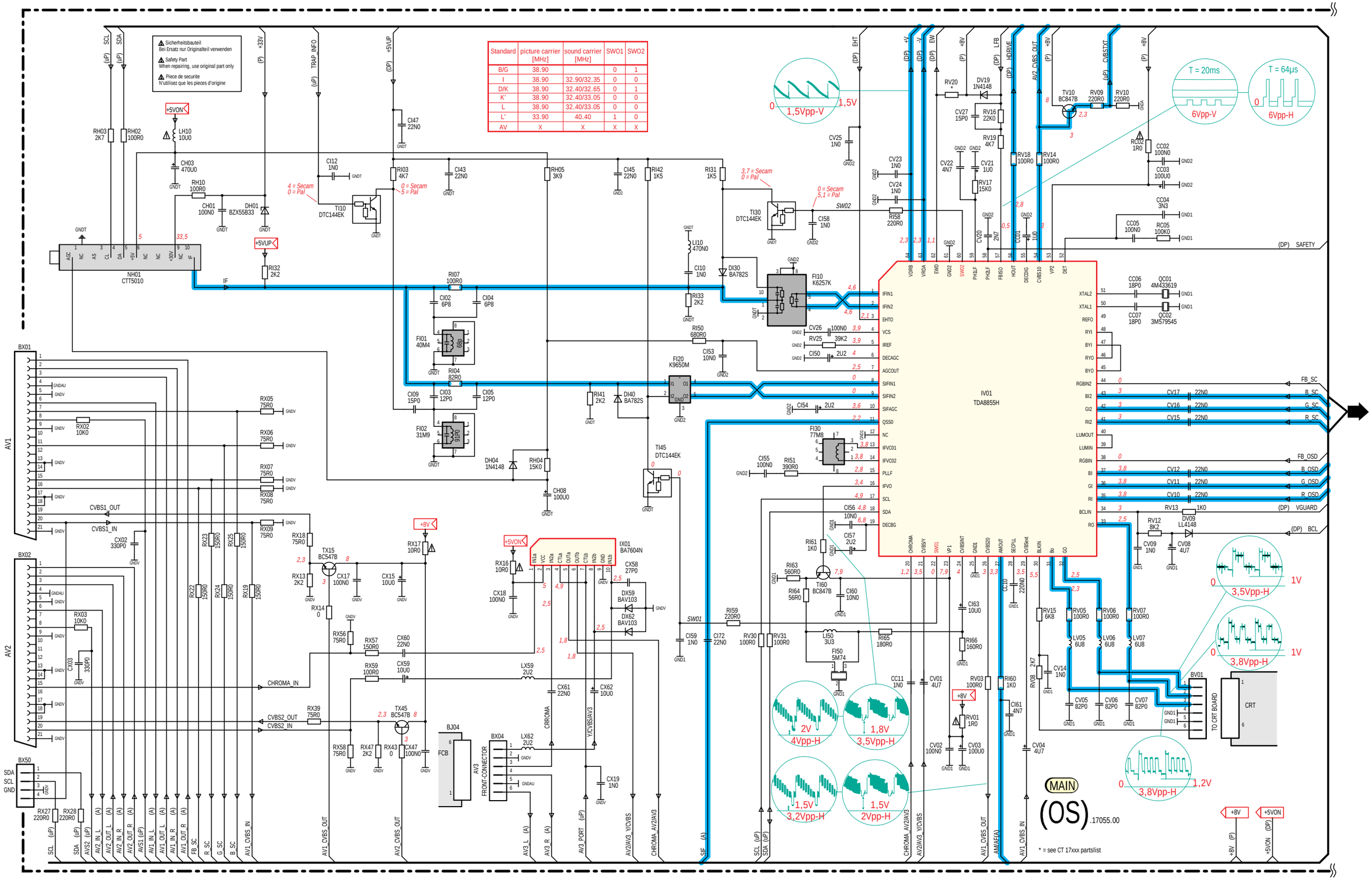
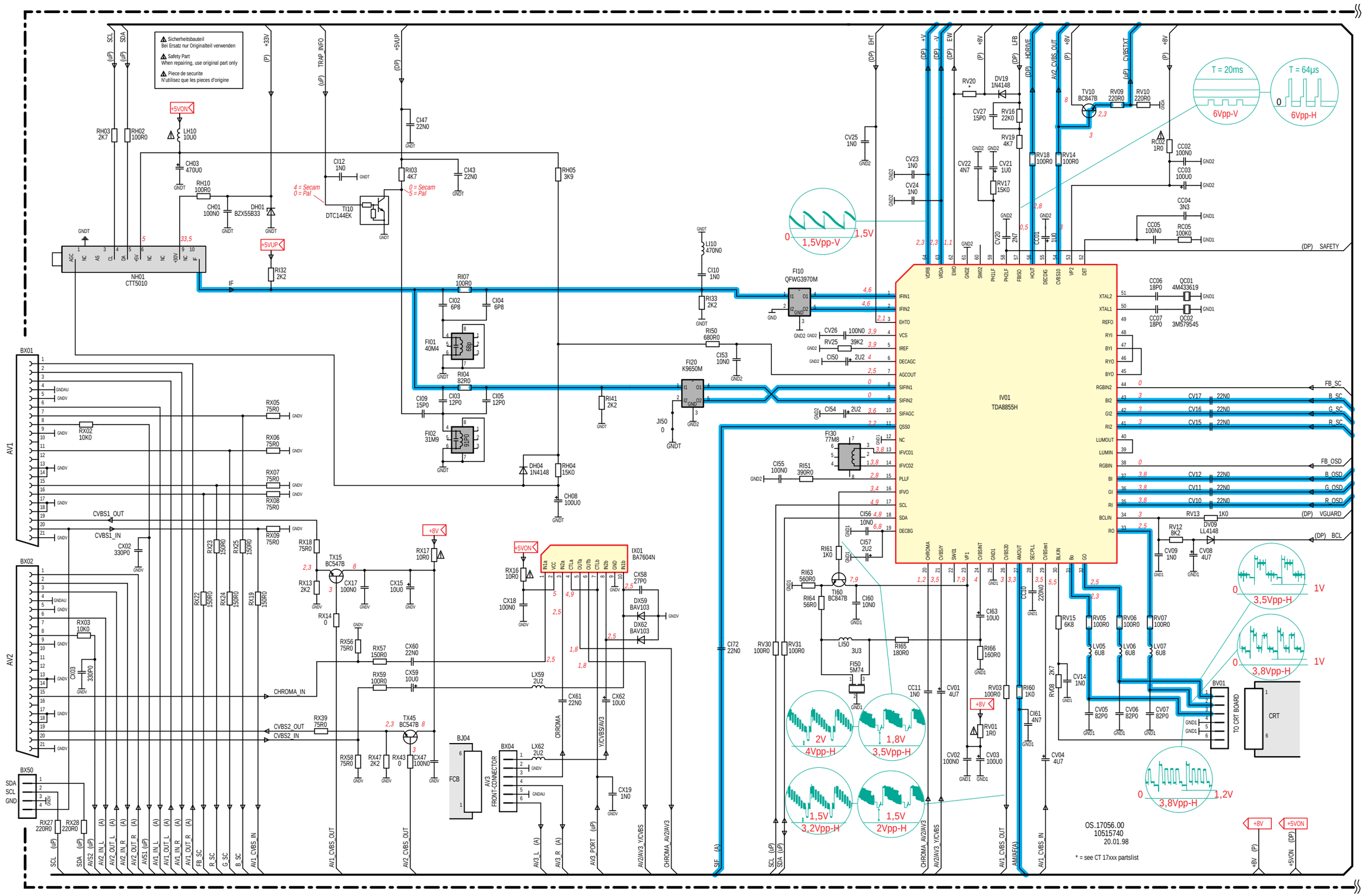
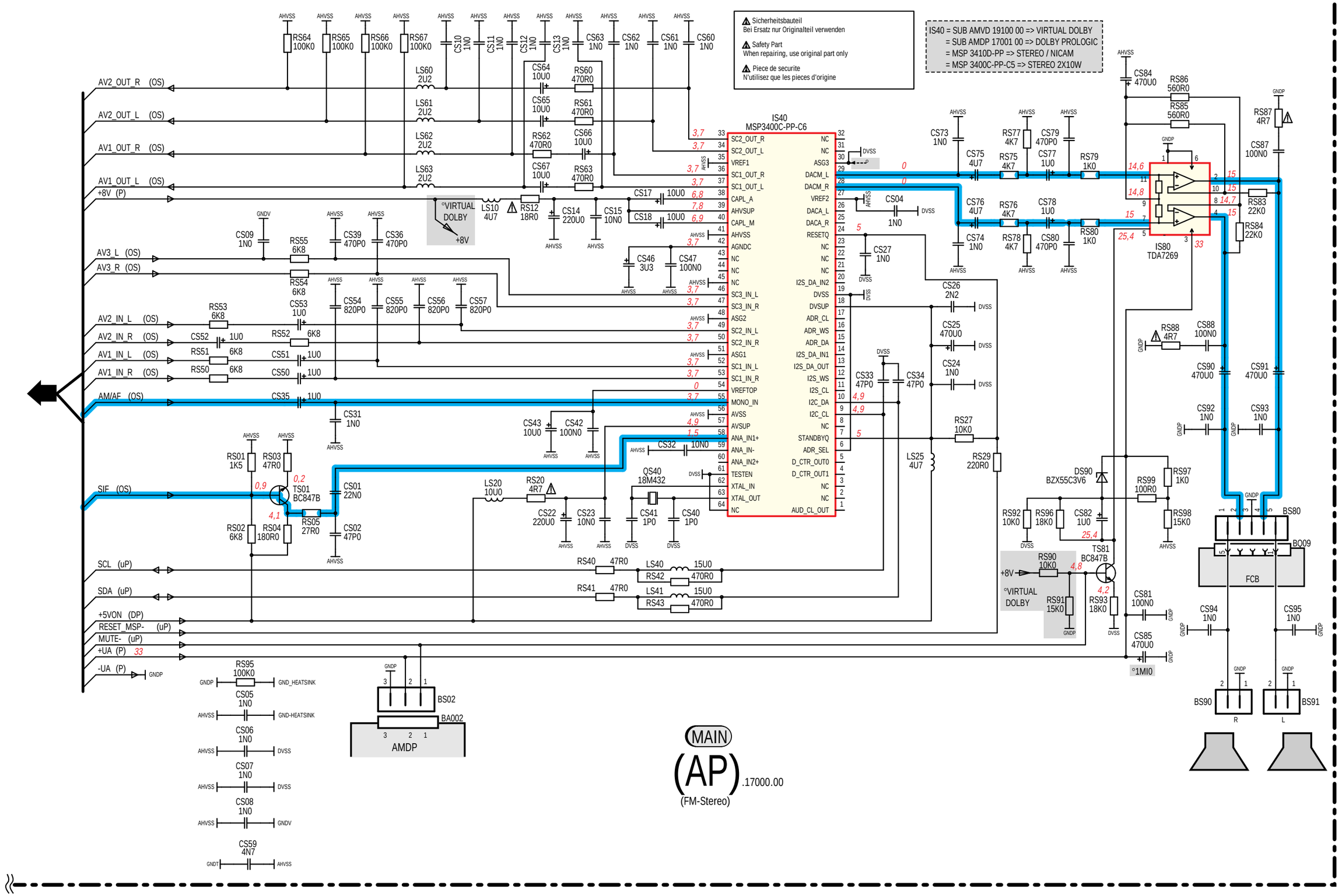
RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR / TRATAMENTO VIDEO



RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR/TRATAMENTO VIDEO



AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE ESQUEMA DEL AMPLIFICADOR
(STEREO)



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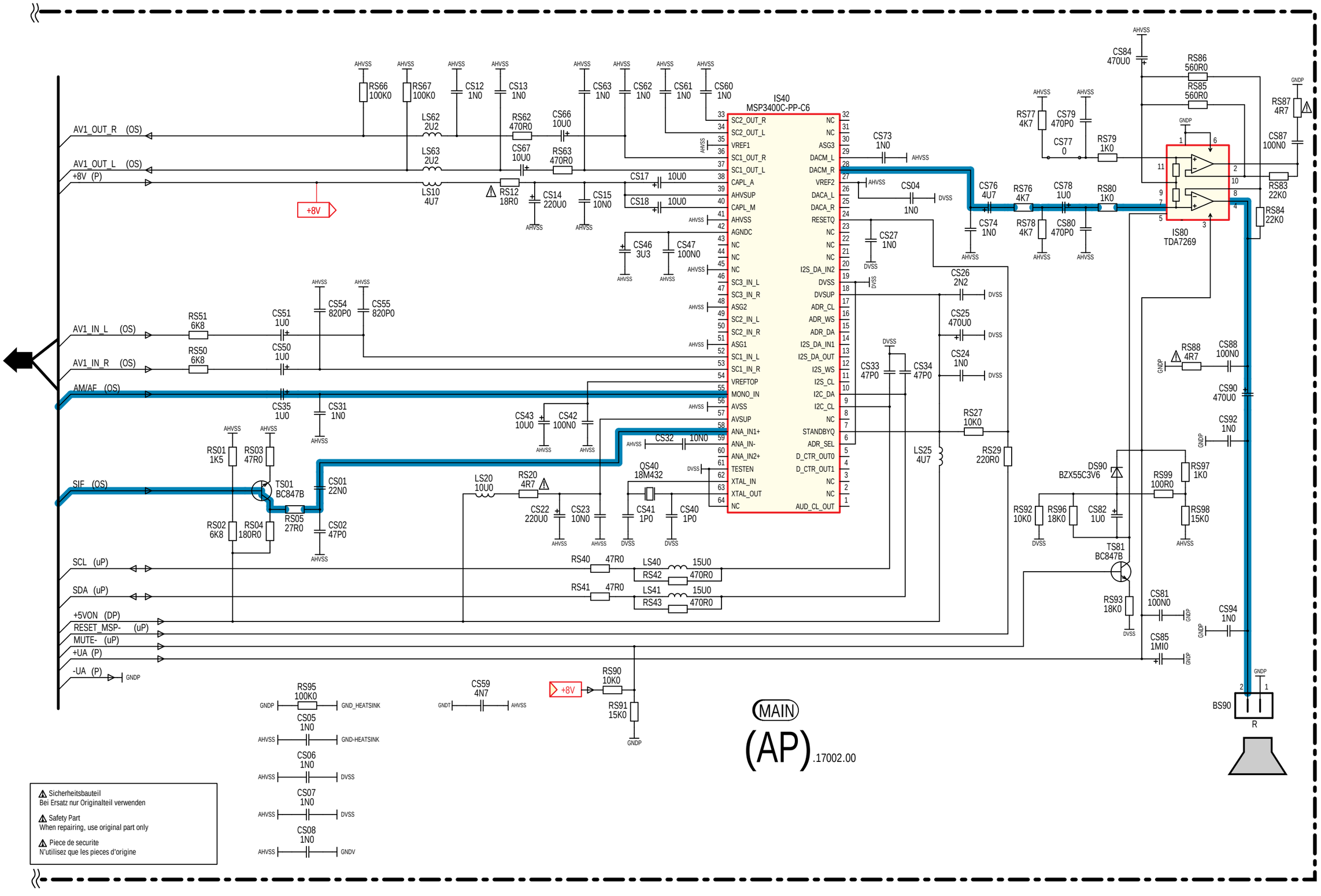
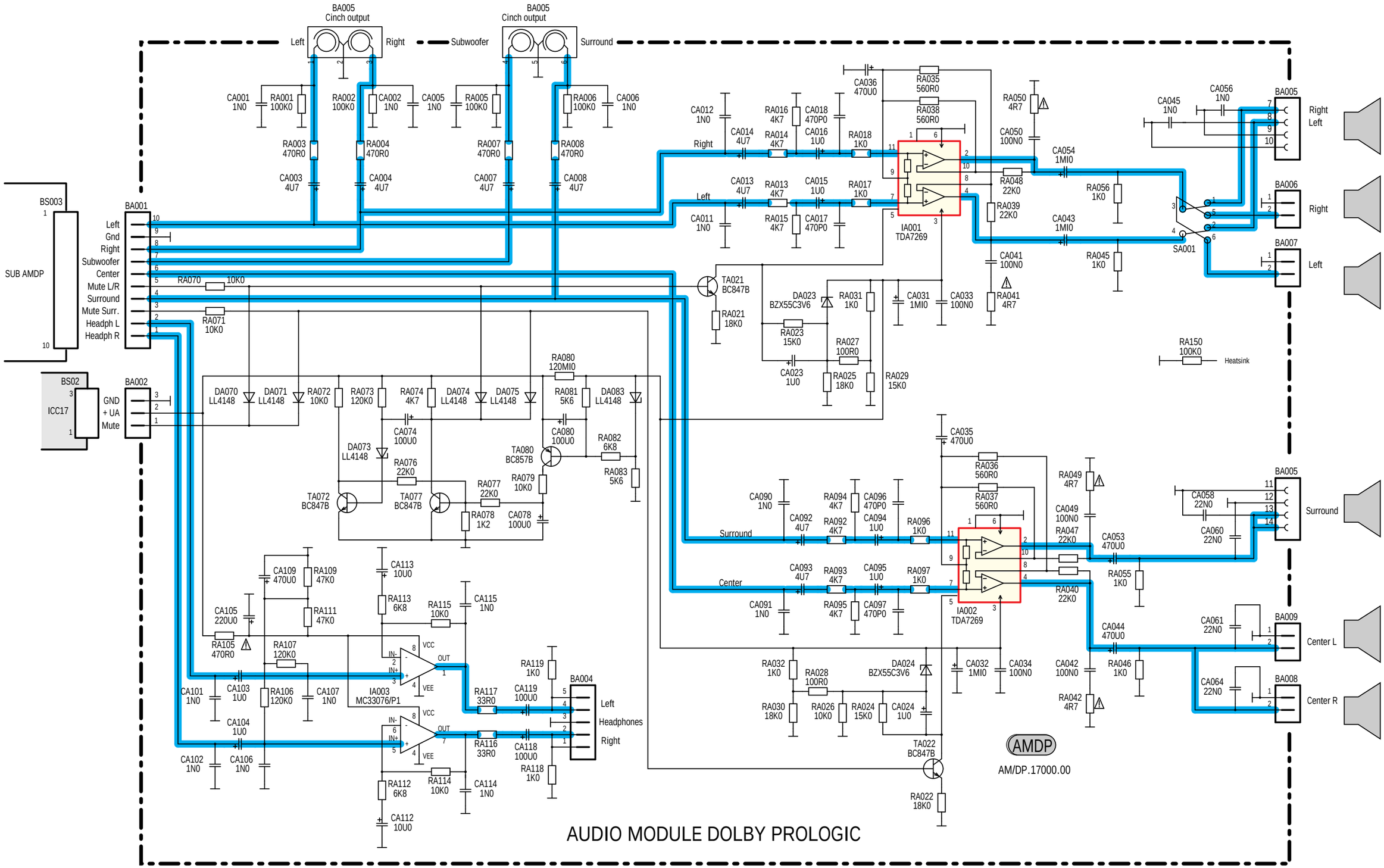
AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE - ESQUEMA DEL AMPLIFICADOR
(MONO)



AUDIO SIGNAL MODULE DOLBY PROLOGIC - MODULE AUDIO DOLBY PROLOGIC - DOLBY PROLOGIC VERSTÄRKER - MODULO AUDIO DOLBY PROLOGIC
ESQUEMA DEL MÕDULO AMPLIFICADOR DE AUDIO



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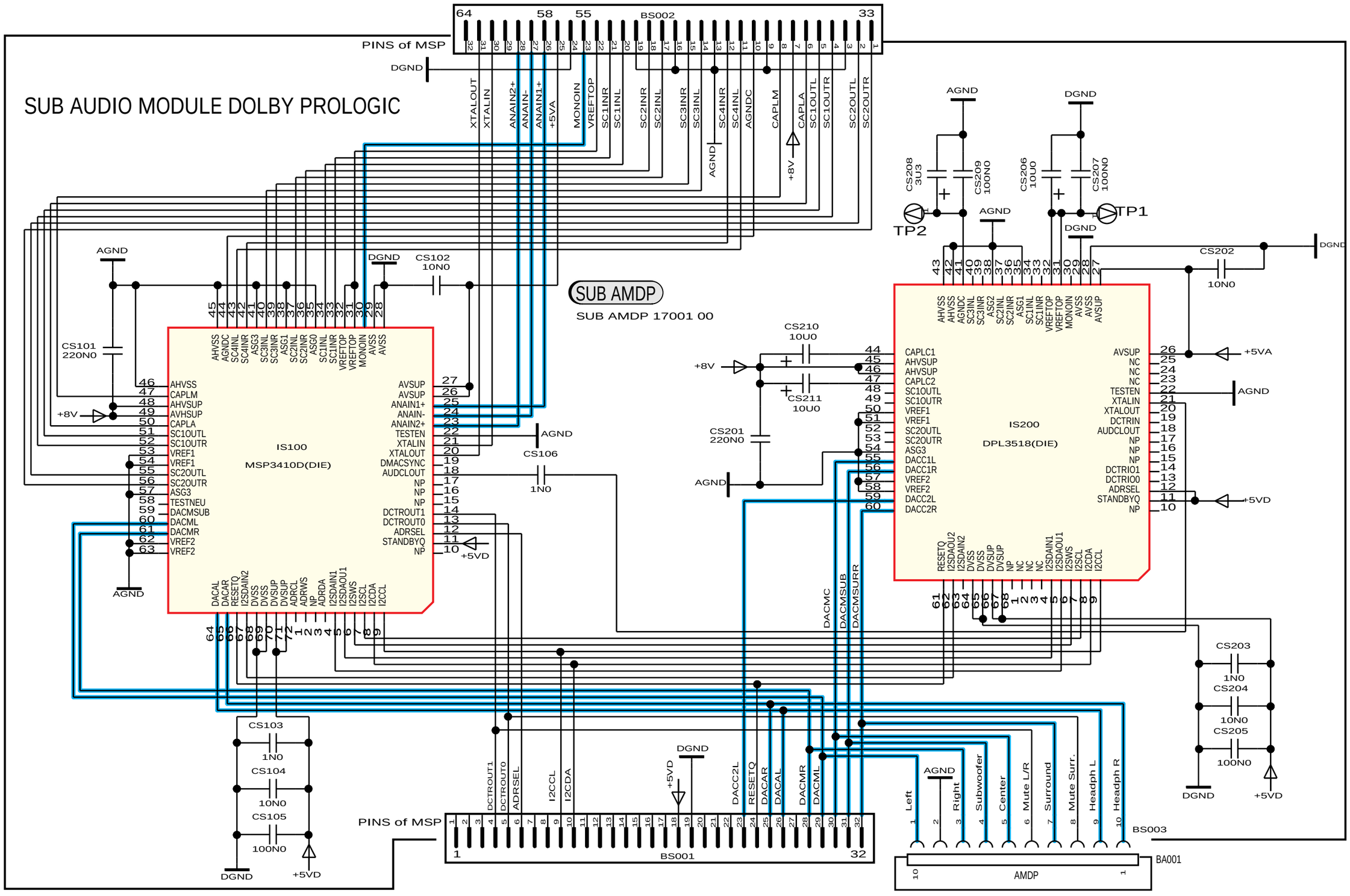

SUB AUDIO MODULE DOLBY PROLOGIC
PINS of MSP
BS002
DGND
XTALOUT
XTALIN
ANAIN2+
ANAIN-
ANAIN1+
+5VA
MONOIN
VREFTOP
SC1INR
SC1INL
SC2INR
SC2INL
SC3INR
SC3INL
AGND
SC4INR
SC4INL
AGNDC
CAPLM
+8V
CAPLA
SC1OUTL
SC1OUTR
SC2OUTL
SC2OUTR
SUB AMDP
SUB AMDP 17001 00
IS100
MSP3410D(DIE)
AHVSS
CAPLM
AHVSUP
AVHSUP
CAPLA
SC1OUTL
SC1OUTR
VREF1
VREF1
SC2OUTL
SC2OUTR
ASG3
TESTNEU
DACMSUB
DACML
DACMR
VREF2
VREF2
AVSUP
AVSUP
ANAIN1+
ANAIN-
ANAIN2+
TESTEN
XTALIN
XTALOUT
DMACSYNC
AUDCLOUT
NP
NP
NP
DCTROUT1
DCTROUT0
ADRSEL
STANDBYQ
NP
+5VD
DACAL
DACAR
RESETQ
I2SDAIN2
DVSS
DVSS
DVSUP
DVSUP
ADRCL
ADRWS
NP
ADRDA
I2SDAIN1
I2SDAOU1
I2SWS
I2SCL
I2CDA
I2CCL
IS200
DPL3518(DIE)
CAPLC1
AHVSUP
AHVSUP
CAPLC2
SC1OUTL
SC1OUTR
VREF1
VREF1
SC2OUTL
SC2OUTR
ASG3
DACC1L
DACC1R
VREF2
VREF2
DACC2L
DACC2R
AVSUP
NC
NC
NC
TESTEN
XTALIN
XTALOUT
DCTRIN
AUDCLOUT
NP
NP
NP
DCTRIO1
DCTRIO0
ADRSEL
STANDBYQ
NP
RESETQ
I2SDAOU2
I2SDAIN2
DVSS
DVSS
DVSUP
DVSUP
NP
NC
NC
NC
I2SDAIN1
I2SDAOU1
I2SWS
I2SCL
I2CDA
I2CCL
DACMC
DACMSUB
DACMSURR
CS101 220N0
CS102 10N0
CS103 1N0
CS104 10N0
CS105 100N0
CS106 1N0
CS201 220N0
CS202 10N0
CS203 1N0
CS204 10N0
CS205 100N0
CS206 10U0
CS207 100N0
CS208 3U3
CS209 100N0
CS210 10U0
CS211 10U0
TP1
TP2
PINS of MSP
BS001
BS003
BA001
AMDP
Left
Right
Subwoofer
Center
Mute L/R
Surround
Mute Surr.
Headph L
Headph R

POWER SUPPLY - ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

(5) : standby

Note :
During measurements in the power supply unit
- Use the primary power unit ground (PGND).

Attention :
Mesure dans le bloc alimentation
- Utiliser la masse du bloc alimentation (PGND).

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden (PGND).

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario (PGND).

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion (PGND).

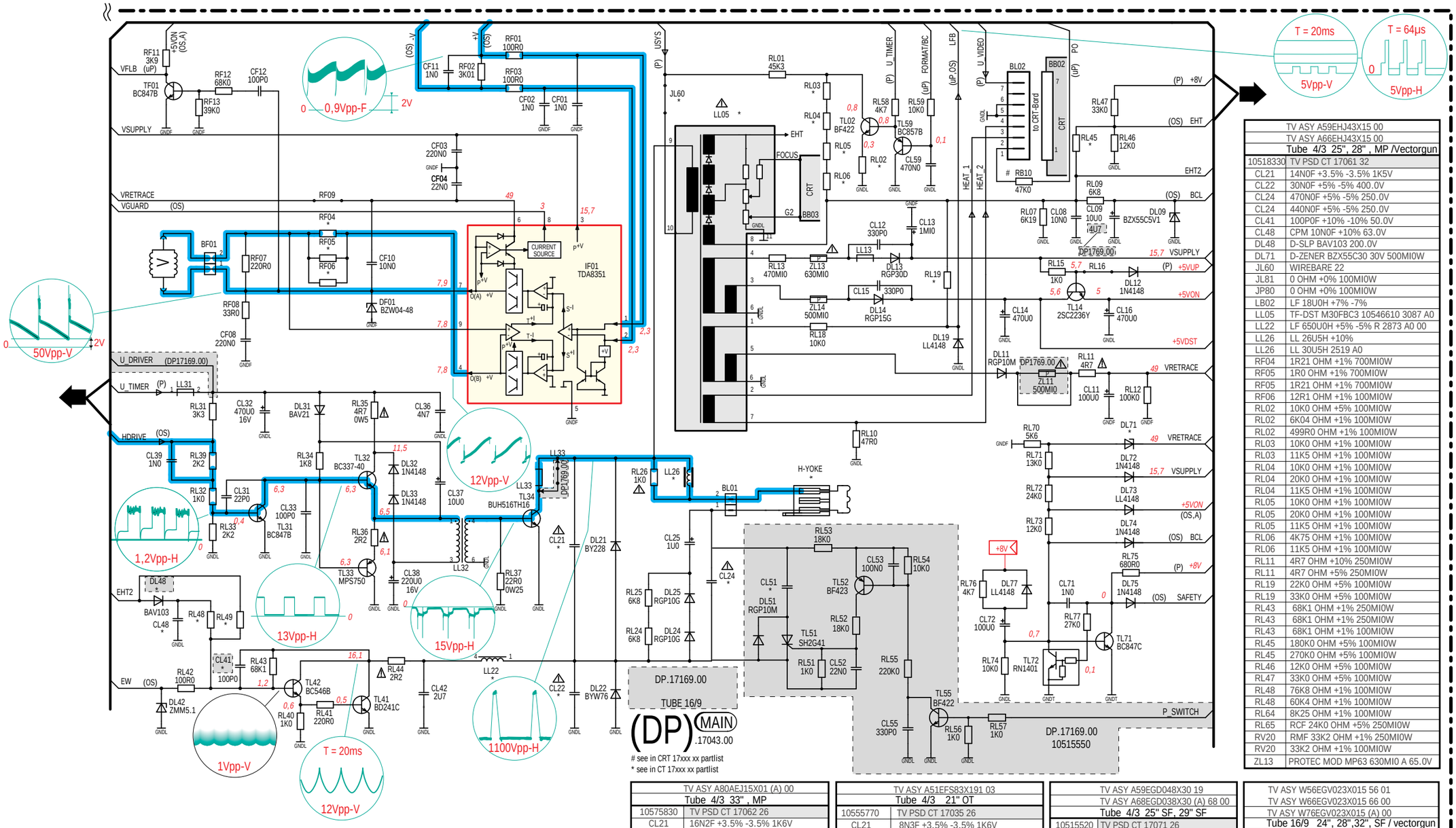
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

MAIN (PP)17900

Tube	Format	Usys	Jumper	RL65
A51EFS83X191	4:3	126V	JL80	4k7
A59EHJ43X15	4:3	132V	JL81	24k
A66EHJ43X15	4:3	132V	JL81	24k
A59EGD048X30	4:3	126V	JL80	4k7
A68EGD038X30	4:3	126V	JL80	4k7
A68AGA25X01	4:3	126V	JL80	4k7
A80AEJ15X01	4:3	126V	JL80	4k7
W56EGV023X015	16:9	138V	JL82	47k
W66EGV023X015	16:9	138V	JL82	47k
W76EGV023X015	16:9	138V	JL82	47k

⚠ Use isolating mains transformer - Utiliser un transformateur isolateur du secteur -Einen Trenntrafo verwenden
Utilizar un transformador aislador de red - Utilizzare un trasformatore per isolarvi dalla rete

SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE



TV ASY A59EHJ43X15 00	
TV ASY A66EHJ43X15 00	
Tube 4/3 25", 28" , MP /Vectorgun	
10518330	TV PSD CT 17061 32
CL21	14N0F +3.5% -3.5% 1K5V
CL22	30N0F +5% -5% 400.0V
CL24	470N0F +5% -5% 250.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	CPM 10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL81	0 OHM +0% 100MI0W
JP80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10546610 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
LL26	LL 30U5H 2519 A0
RF04	1R21 OHM +1% 700MI0W
RF05	1R0 OHM +1% 700MI0W
RF05	1R21 OHM +1% 700MI0W
RF06	12R1 OHM +1% 100MI0W
RL02	10K0 OHM +5% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL02	499R0 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL03	11K5 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL04	20K0 OHM +1% 100MI0W
RL04	11K5 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL05	20K0 OHM +1% 100MI0W
RL05	11K5 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL06	11K5 OHM +1% 100MI0W
RL11	4R7 OHM +10% 250MI0W
RL11	4R7 OHM +5% 250MI0W
RL19	22K0 OHM +5% 100MI0W
RL19	33K0 OHM +5% 100MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL45	270K0 OHM +5% 100MI0W
RL46	12K0 OHM +5% 100MI0W
RL47	33K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL48	60K4 OHM +1% 100MI0W
RL64	8K25 OHM +1% 100MI0W
RL65	RCF 24K0 OHM +5% 250MI0W
RV20	RMF 33K2 OHM +1% 250MI0W
RV20	33K2 OHM +1% 100MI0W
ZL13	PROTEC MOD MP63 630MI0 A 65.0V

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil.
Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) durch nicht normgerechte Teile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (contrassegnati con il segno ⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio.
In tal caso é “esclusa la responsabilità” del costruttore.

La subtitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato.
En ese caso, el fabricante cesa de ser responsable.

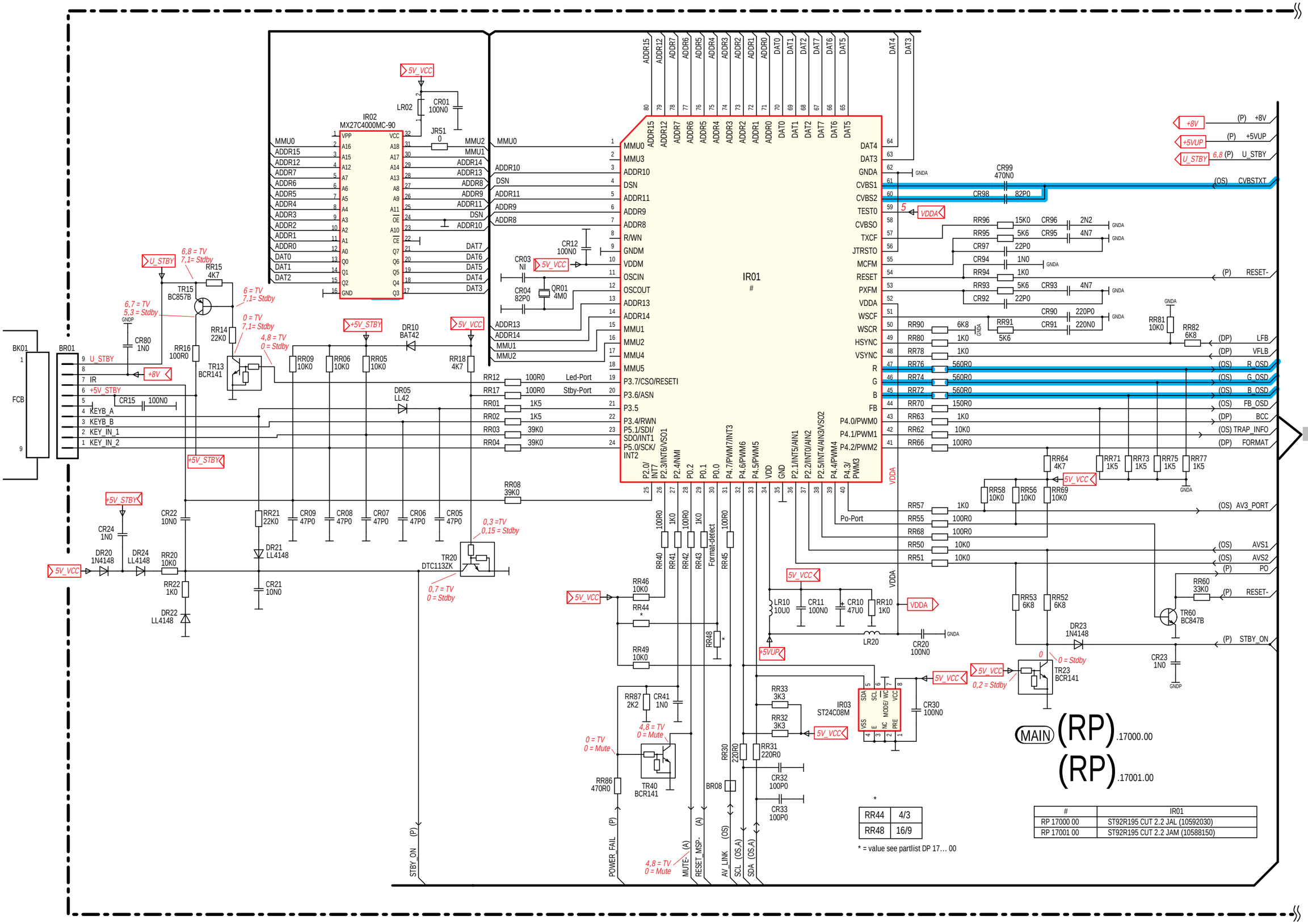
TV ASY A80AEJ15X01 (A) 00	
Tube 4/3 33" , MP	
10575830	TV PSD CT 17062 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	560N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 11
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
RF05	1R21 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	6K81 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	150K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL49	560K0 OHM +5% 100MI0W
RL65	RCF 4K7 OHM +5% 250MI0W
RV20	RMF 23K7 OHM +1% 250MI0W

TV ASY A51EFS83X191 03	
Tube 4/3 21" OT	
10555770	TV PSD CT 17035 26
CL21	8N3F +3.5% -3.5% 1K6V
CL22	33N0F +5% -5% 1K0V
CL24	440N0F +5% -5% 250.0V
CL41	1N0F +10% -10% 50.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10555640 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 85U0H 2519 A0
RF05	1R5 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL06	3K32 OHM +1% 100MI0W
RL45	110K0 OHM +5% 100MI0W
RL49	60K4 OHM +1% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	23K7 OHM +1% 250MI0W

TV ASY A59EGD048X30 19 TV ASY A68EGD038X30 (A) 68 00	
Tube 4/3 25" SF, 29" SF	
10515520	TV PSD CT 17071 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	510N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 13
LL22	LF 650U0H +5% -5%
LL26	LL 26U5H +10%
RF05	RMF 1R0 OHM +1% 700MI0W
RL02	6K8 OHM +5% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL19	15K0 OHM +5% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL48	100K0 OHM +5% 100MI0W
RL49	300K0 OHM +5% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	33K2 OHM +1% 250MI0W

TV ASY W56EGV023X015 56 01 TV ASY W66EGV023X015 66 00 TV ASY W76EGV023X015 (A) 00	
Tube 16/9 24", 28",32", SF / vectorgun	
10515530	TV PSD CT 17083 38
CL21	15N5F +3.5% -3.5% 1K6V
CL22	27N0F +5% -5% 400.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	100N0F +5% 63.0V
CL51	290N0F +5% -5% 250.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL82	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 15314460 10
LL22	LF 650U0H +5% -5%
LL26	LL 30U5H 2519 A0
RF05	1R21 OHM +1% 700MI0W
RL02	4K99 OHM +1% 100MI0W
RL03	6K49 OHM +1% 100MI0W
RL04	6K49 OHM +1% 100MI0W
RL05	6K49 OHM +1% 100MI0W
RL06	2K37 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	390K0 OHM +5% 100MI0W
RL48	220K0 OHM +5% 100MI0W
RL49	180K0 OHM +5% 100MI0W
RL65	47K0 OHM +5% 250MI0W
RV20	100K0 OHM +1% 250MI0W

CONTROL MICROPROCESSOR - MICROPROCESSEUR DE COMMANDE - MIKROPROZESSOR - MICROPROCESSORE DEI COMANDI - MICROPROCESADOR DE LOS MANDOS



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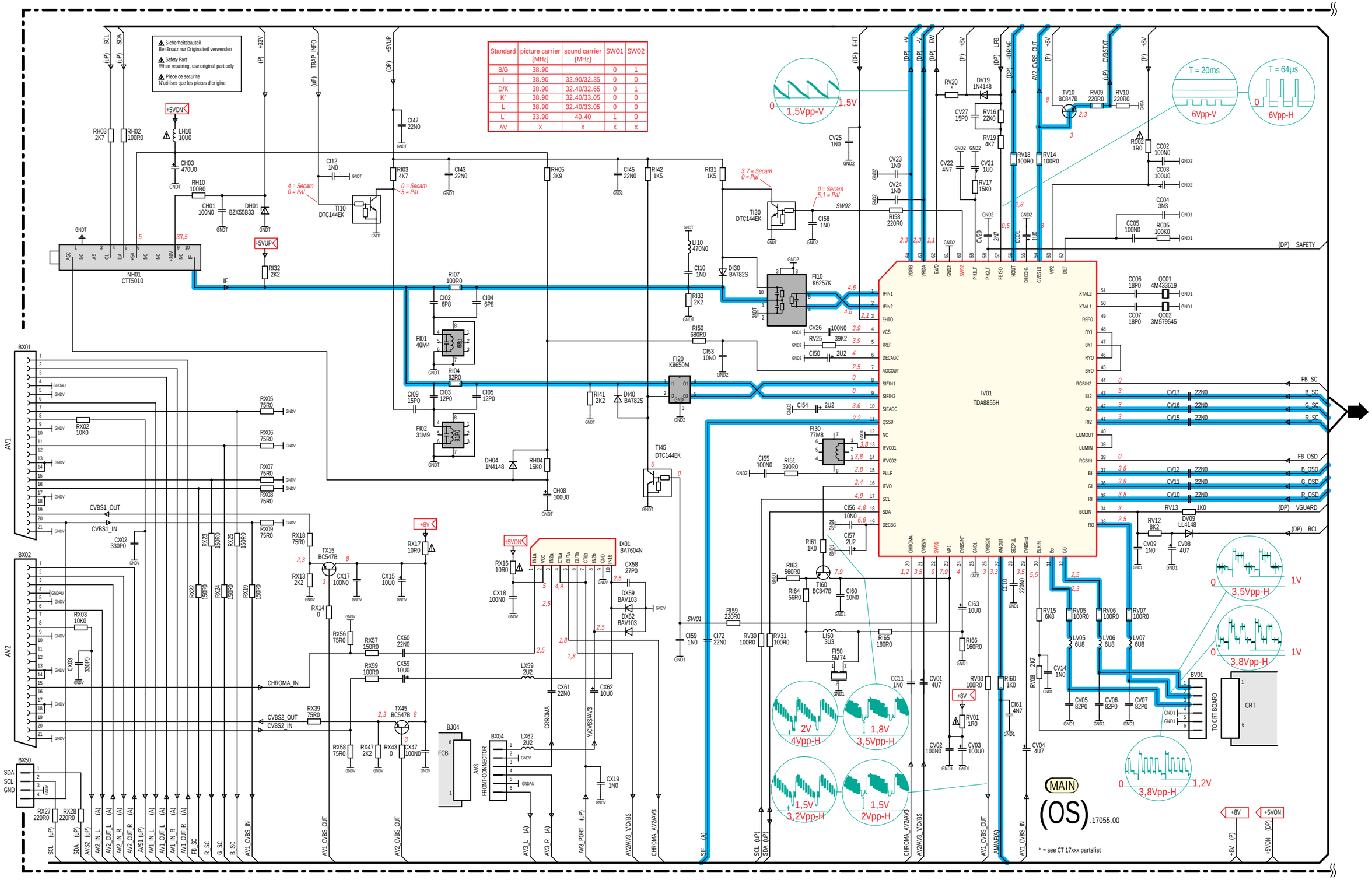
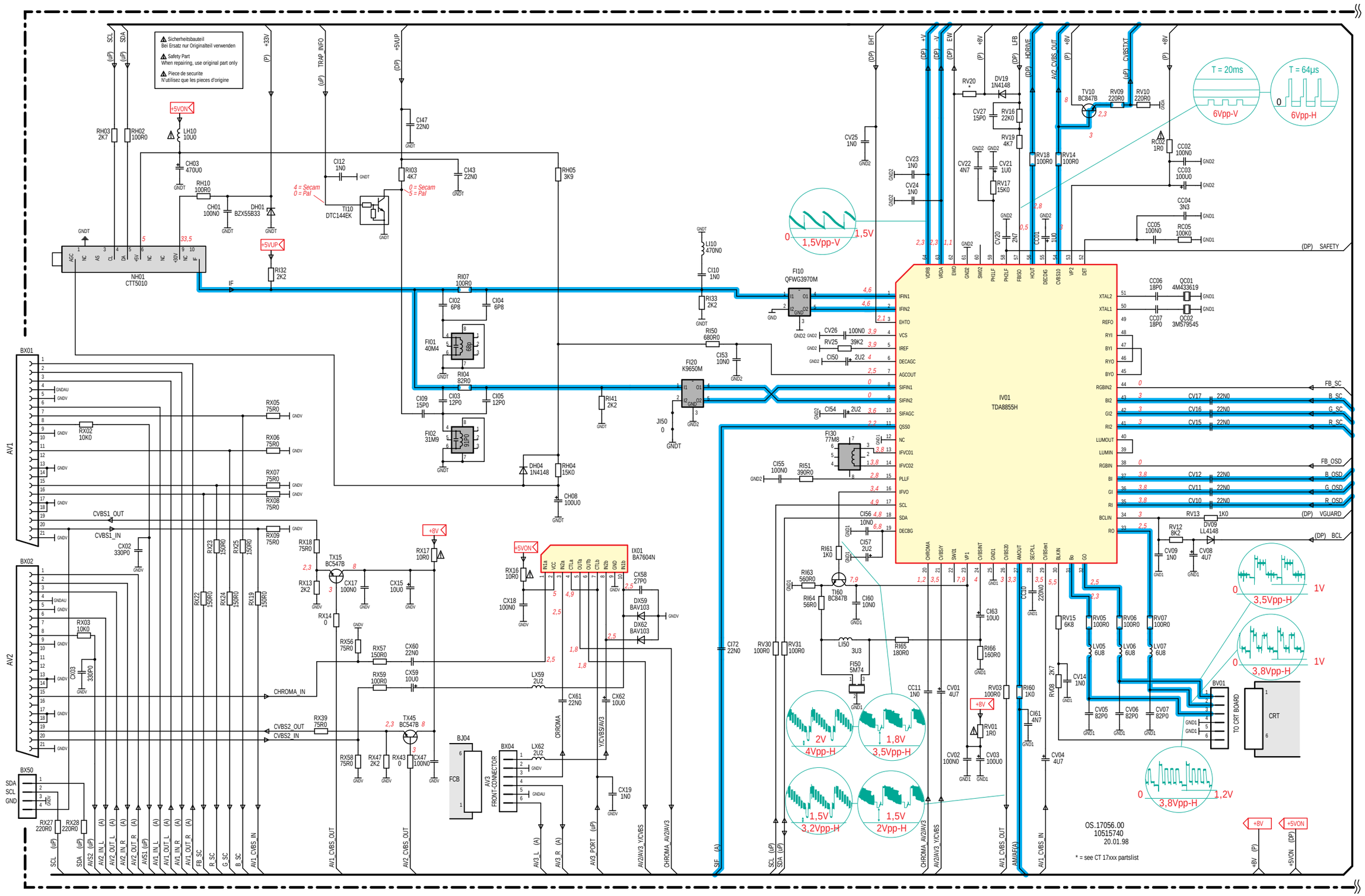
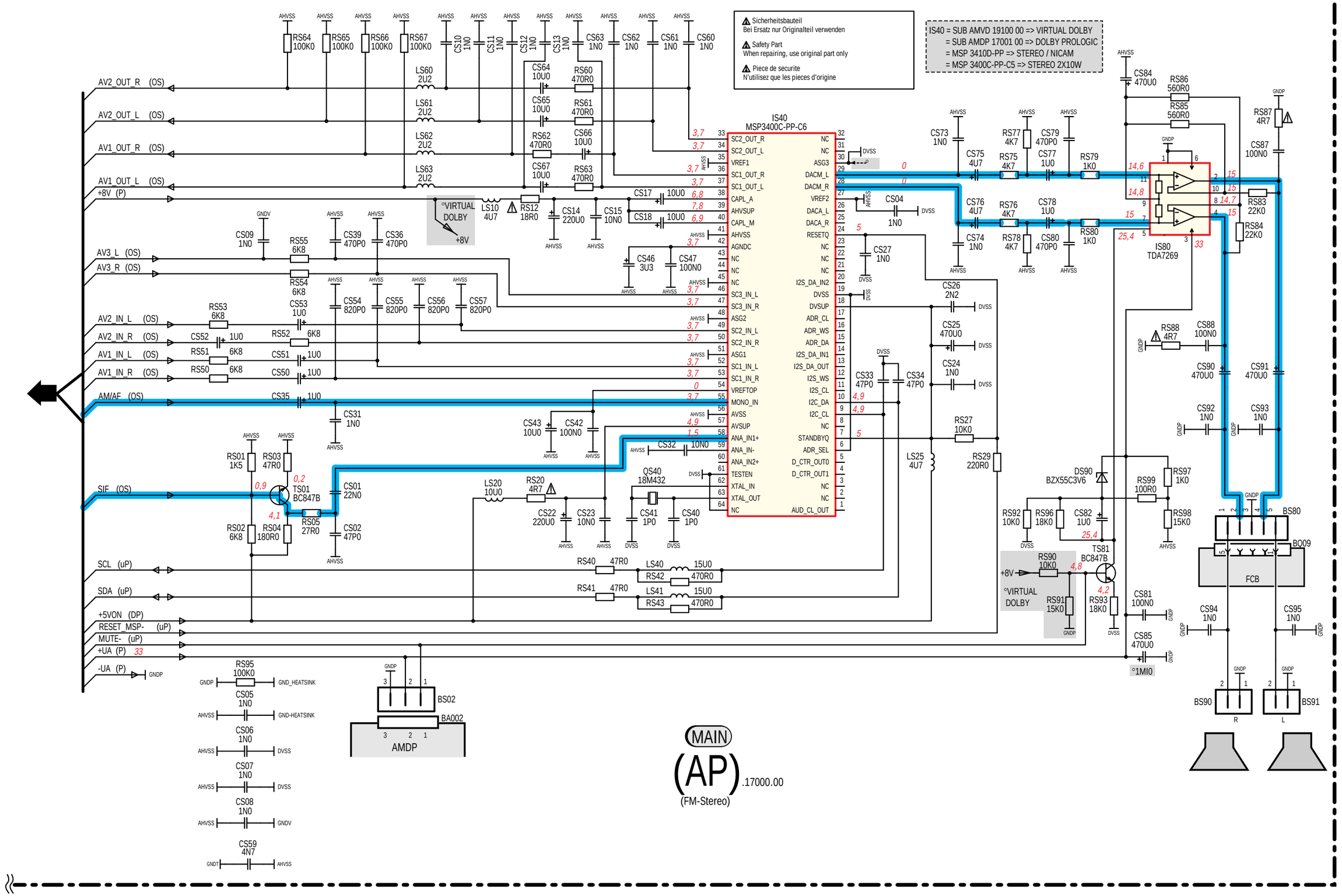


RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR/TRATAMENTO VIDEO



AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE ESQUEMA DEL AMPLIFICADOR
(STEREO)



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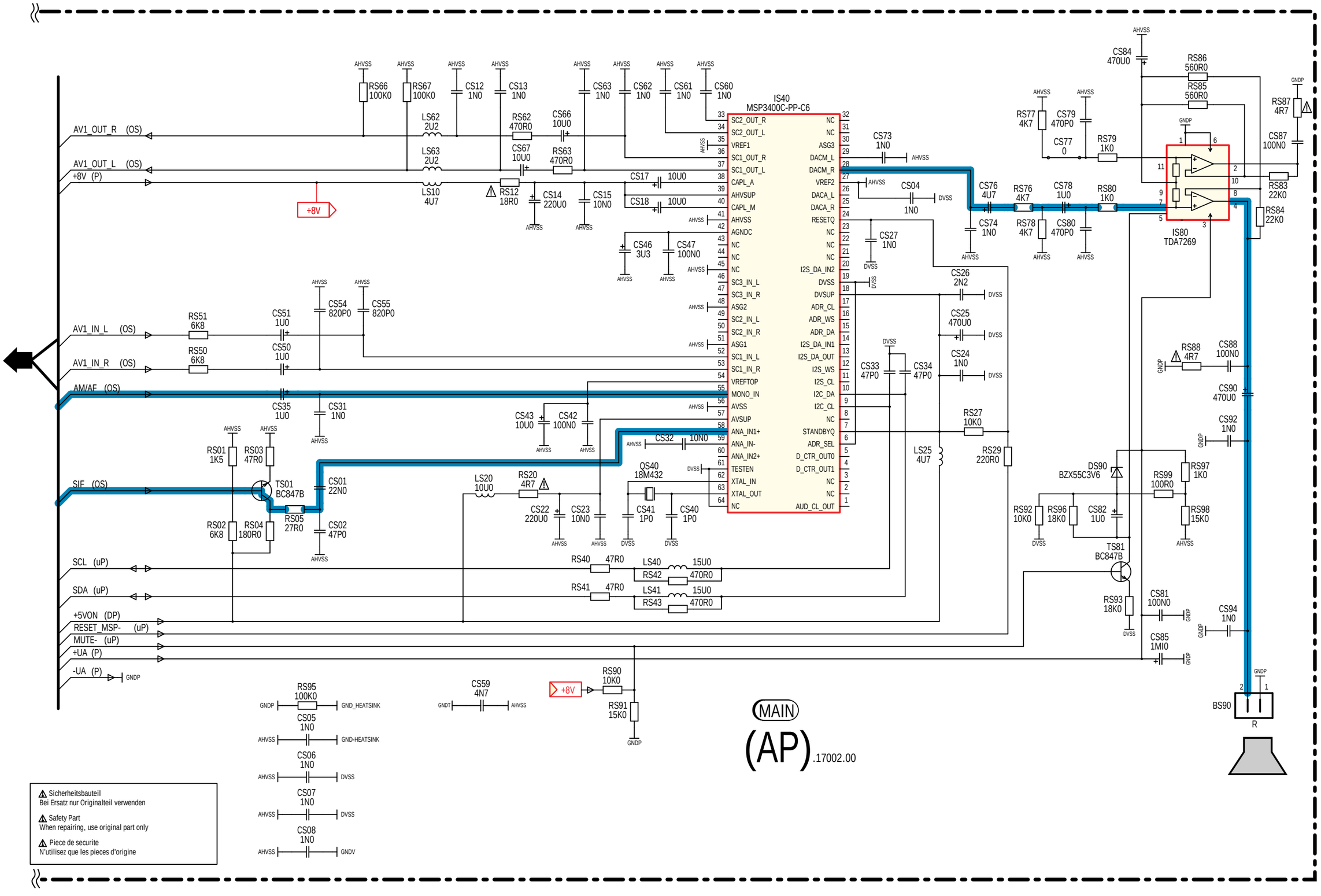
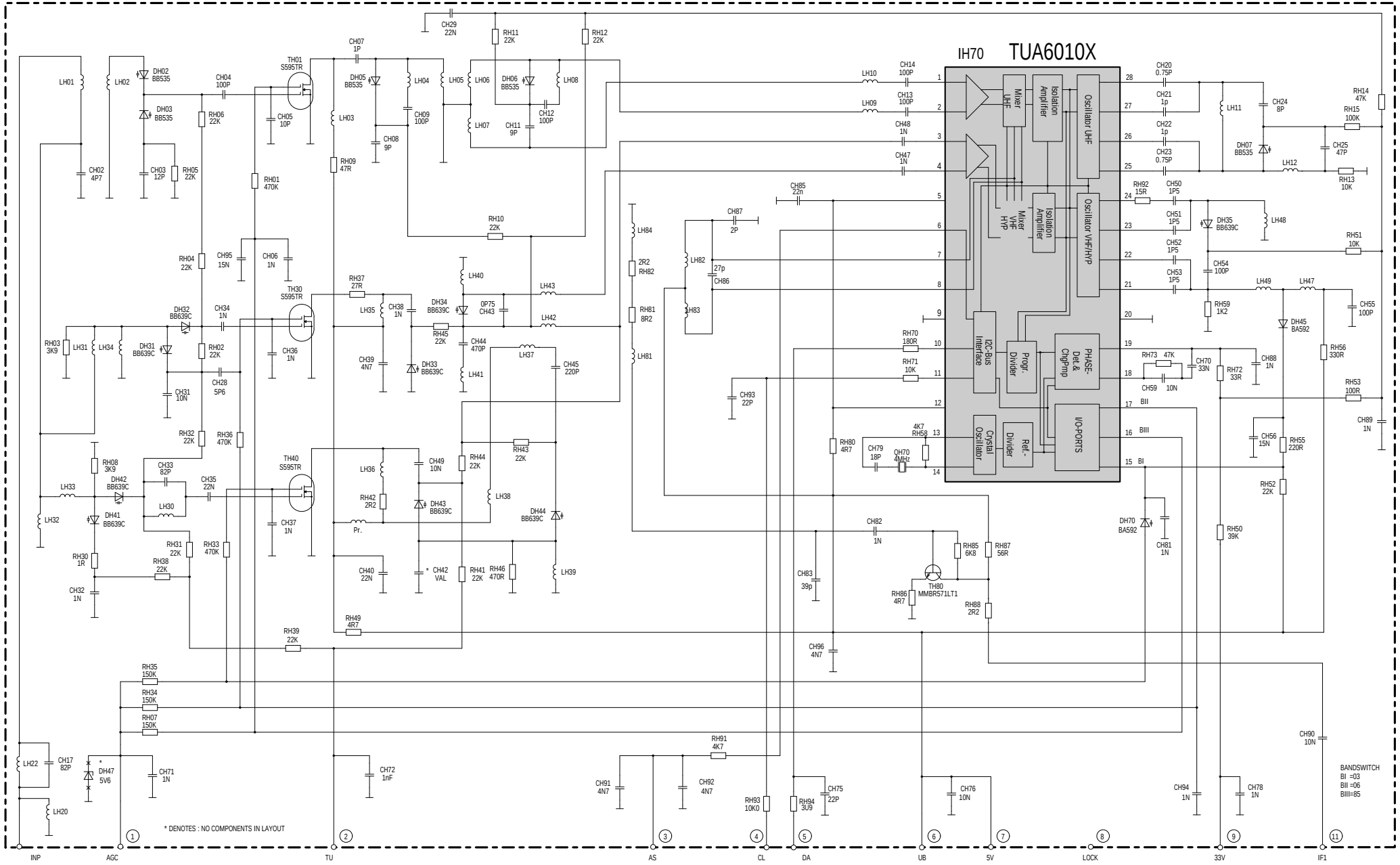
AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE - ESQUEMA DEL AMPLIFICADOR
(MONO)



VHF / UHF TUNER CTT5010

(For information only)



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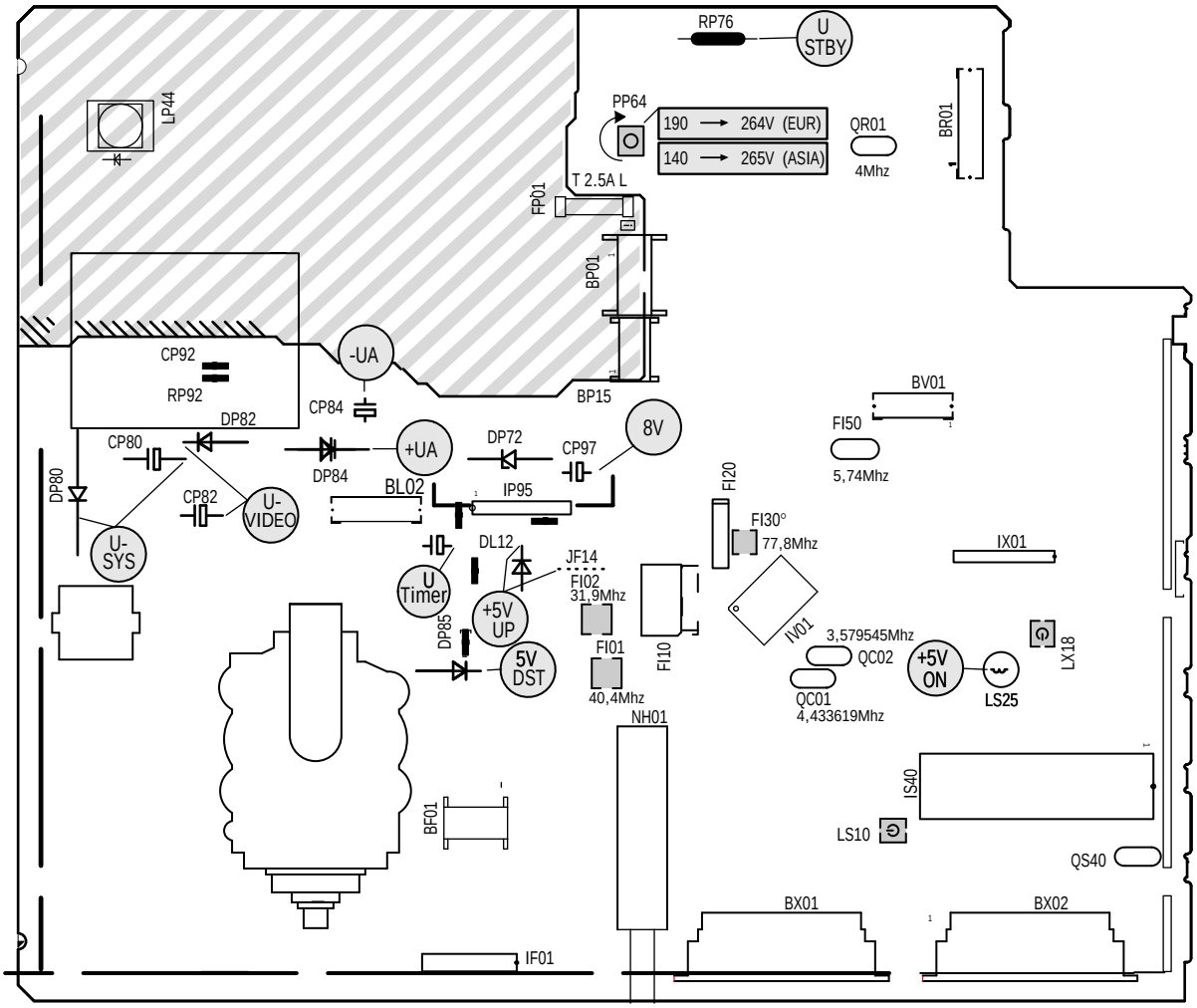
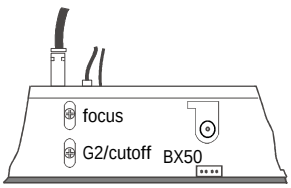
LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGOLATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



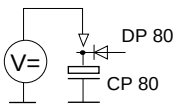
° it is not necessary , to adjust FI30 by after sales



Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectada a la red.

⚠ Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un trasformatore per isolarvi dalla rete

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

<table>
<tr>
<td>U Sys</td>
<td>PP 64</td>
<td>+ + = 50%</td>
<td> 
</td>
<td>
<table>
<tr><th>Tube</th><th>Format</th><th>Usys</th><th>Jumper</th><th>RL65</th></tr>
<tr><td>A51EFS83X191</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A59EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
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<tr><td>W56EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
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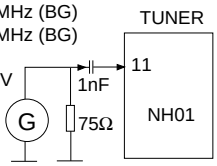
<tr><td>W76EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
</table>
</td>
</tr>
<tr>
<td rowspan="2">IF Alignment
Alignement FI</td>
<td>trap 40,4Mhz
FI 01</td>
<td rowspan="2">Switch set to standard BG
Commuter le TV au standard BG

IF Signal
40,4MHz (BG)
31,9MHz (BG)
 
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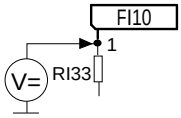
<td> 
</td>
<td>Adjust FI01 for minimum value at 40,4Mhz</td>
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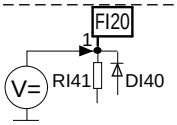
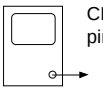
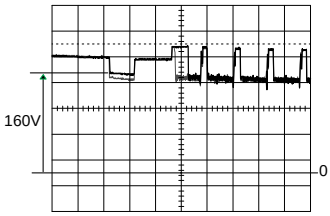
<tr>
<td>trap 31,9Mhz
FI 02</td>
<td> 
</td>
<td>Adjust FI20 for minimum value at 31,9Mhz</td>
</tr>
<tr>
<td>U G2 / cutoff</td>
<td>SCREEN</td>
<td>+ + = 50%

AV (no Signal, black screen)</td>
<td> 
CRT IB01:
pins 9 / 12 / 15
highest output</td>
<td> 
</td>
</tr>
<tr>
<td>FOCUS</td>
<td>FOCUS
LL05</td>
<td> Test pattern
(standard values)</td>
<td> </td>
<td>Sharp picture</td>
</tr>
</table>

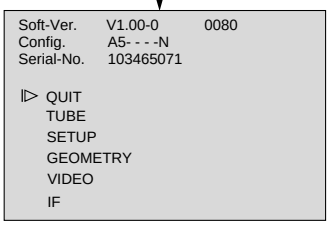
SERVICE MODE (GB) — MODE SERVICE (F)

I - ENTER/EXIT SERVICE MODE - ENTREE/SORTIE DU MODE SERVICE

1 ACCESSING THE SERVICE MODE

TV Control Panel Access

- Switch the TV into **"Standby"** mode by pressing the Standby button on the RCU.
- Switch **"OFF"** the mains supply to the TV and wait for the LED to extinguish.
- Whilst holding depressed the **PR -** and **VOL-** (8s), switch **"ON"** the mains supply to the TV.
- Once initialised, the **Main Service Menu** will appear on the screen of the TV.



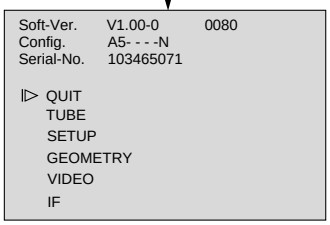
Please Note:

In the service mode :
- *The CHILD LOCK function is re-initialised.The LOCK function (PIN number) is ignored.*
- *All Wake-up/Sleep timer settings are CLEARED.*
- *SCART socket pin 8 switching voltages are ignored.*
- *AV-Link, WSS Detection, EPG and TELETEXT functions are disabled.*
- *Automatic standby mode switching functions (no signal conditions) are disabled.*
- *Brightness, Colour and Contrast are set to factory defaults.*
- *Sharpness settings are set to MID position.*
- *Contrast Expand is set to LOW.*
- *Automatic INSTALL mode is disabled.*
- *FORMAT and ZOOM are reset to factory defaults.*

1 ACCES AU MODE SERVICE

Accès avec le clavier du téléviseur

- Commuter le téléviseur en position de veille avec la télécommande. Eteindre le téléviseur par l'interrupteur secteur (attendre l'extinction complète du voyant).
- Tout en appuyant sur les touches **PR -** et **VOL - ,** mettre le TV en service à l'aide de la touche **M/A**.
- Maintenir enfoncées les touches **PR -** et **VOL -**. (8s) Le menu suivant apparaît.



Note :

En mode service:
- *Le verrouillage parental est effacé (réinitialisé).*
- *La fonction de verrouillage (Pin number) est ignorée.*
- *La programmation des heures «reveille/matin» est annulée.*
- *Possibilité de passer en mode service avec commutation lente active.*
- *AV- Link , la détection WSS, l'EPG et le Vidéotexte ne sont pas validés.*
- *La fonction de stand-by automatique en cas d'absence de signal d'antenne n'est pas validée.*
- *Les valeurs de réglages usine sont affectées au contraste, à la couleur et à la lumière.*
- *Le contour est appelé à sa valeur moyenne.*
- *L'expansion contraste est au niveau bas.*
- *Le mode ambiance «Light sensor» n'est pas valides.*
- *Zoom et format ignorées.*

2 TEMPORARY EXIT FROM SERVICE MODE

- Press the **"EXIT"** button on the RCU.
- Pressing the **"MENU"** button on the RCU will activate the customer menus.

- The Service Menu can be re-entered by pressing the "BLUE" button on the RCU.

2 SORTIE TEMPORAIRE DU MODE SERVICE

- Utiliser la touche Exit de la télécommande.
- Le menu utilisateur peut être accessible via la touche «Menu».

- Pour entrer à nouveau dans le mode service utliliser la touche bleue.

3 EXITING FROM SERVICE MODE

Remote Control — **TV Control Panel** — **ON/OFF key or "Stand-by" buttons**

- Select the **"QUIT"** line of the **"Main Service Menu".**
- RCU **"Standby"** button or switch **"OFF"** mains supply.
- Press «<», «OK» or «>» button
- Press «VOL.+»button
- TV mode.

*Values or adjustment not **"STORED"** before exiting the service mode will **NOT** be **"SAVED"** in the NVM.*

3 SORTIE DEFINITIVE DU MODE SERVICE

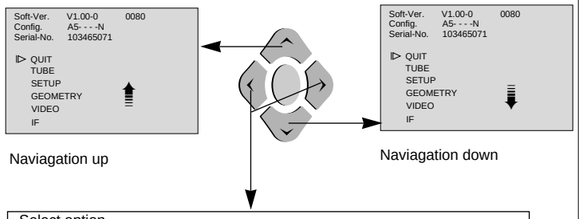
télécommande — **clavier du téléviseur** — **Inter M/A ou Stand-by**

- Aller au point «QUIT» dans le menu principal du mode service.
- Foncion Stand-by ou «off» par M/A
- Appuyer sur «<», «OK» ou «>»
- Appuyer sur «VOL+»
- Mode TV.

Les valeurs ou réglages non mémorisées avant la sortie ne seront pas écrites en NVM.

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE
FUNCTIONS WALLIN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



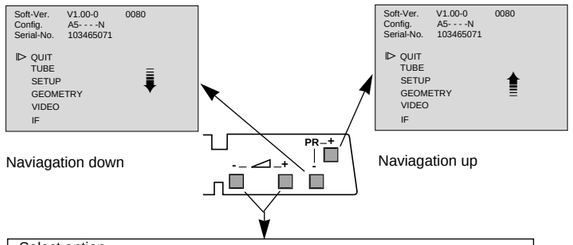
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

> → VALUE

< → VALUE

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE -



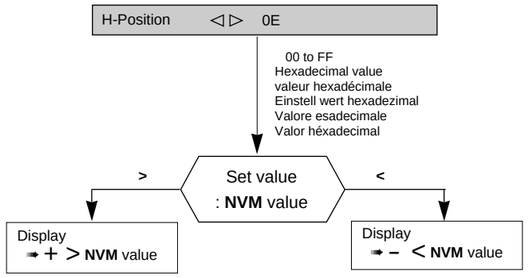
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE

Vol. – → VALUE

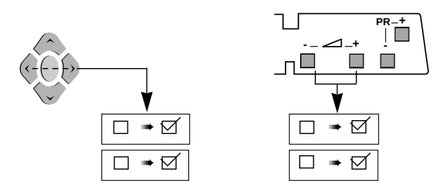
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELL WERTS VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALT FUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☑ the box.
Pour valider une fonction cocher ☑ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☑ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☑ la casella
Para poner en fucionamiento una función verifique (señale) ☑ la casilla

☑ : :Enable function ☐ : Disable function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☑
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati provvisoriamente sulla RAM
Durante el ajuste, los valores son almacenados temporalmente en RAM

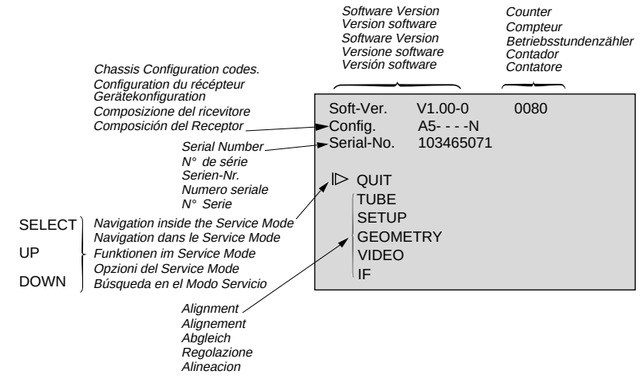
Store ➠ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Werts von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➠ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in den RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

ROM Default ➠ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden im RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL



TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÕN DEL TV

Config.	A1Z-DKC

Character 1 : Tube type : «A»= 4/3 , «W» =16/9
Character 2 : Chassis type : «5» = 50Hz,
Character 3 : Zoom available : «Z»=yes, «-»=not
Character 4 : Ambiant Sensor : «S»= detected, «-»= not
Character 5 : Dolby : «D»=detected, «-»= not
Character 6 : AV Link detected : «K»=IR link detected, «-»= not
Character 7 : Chassis Variant: «N»= Nicam, «S»=Stereo

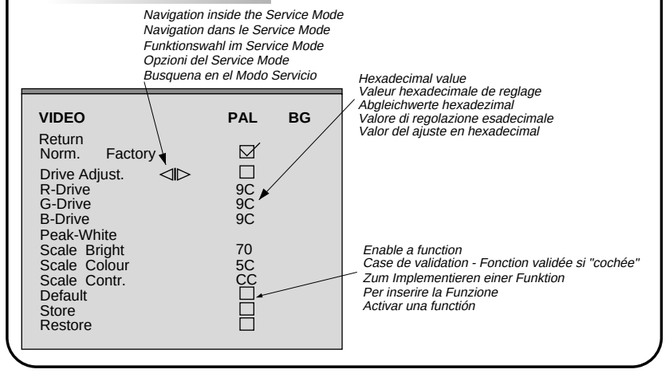
Serial-N0.	AI6------

Character 1 : Factory : «A»= Angers , «C» =Celle, «T» =Tarancon
Character 2 : Year : «G» = 1996, «H»= 1997 etc..
Character 3 : Month, from : «1»=January to «C»=December
Character 4-9 : Serial N0.

TIME COUNTER - COMPTEUR DE TEMPS - BETRIEBSSTUNDENZÄHLER - CONTATORE - CONTADOR

The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contatore da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

TUBE
Return
Tube type A66ECY...
Store ◁▮▷ ☑
Restore ☐

SETUP
Return
Clear Progs. ▮▷
Kbd. Config. Default
WSS ☐
Default ☐
Store ☐
Restore ☐

GEOMETRY
Return
V- Slope 7C
V-Amplitude 6C
V-Position ◁▮▷ 7C
Blanking On ☐
S - Correction 54
H-Position 94
H-Amplitude 70
EW-Amplitude 78
EW-Trapezium 98
Default ☐
Store ☐
Restore ☐

VIDEO **PAL** **BG**
Return
Norm. Factory ☑
Drive Adjust. ◁▮▷ ☐
R-Drive 9C
G-Drive 9C
B-Drive 9C
Peak-White
Scale Bright 70
Scale Colour 5C
Scale Contr. CC
Default ☐
Store ☐
Restore ☐

IF
Return
AGC Take Over ◁▮▷ 88
FFI - Bit ☐
Default ☑
Store ☑
Restore ☑

Test Pattern Signal used: 4/3 with geometric circle. *Adjust separate for 4/3 and 16/9 format. See annexed* *The signals colour standard is auto detected and displayed opposite the main menu line.*

TUBE

Return
Closes the sub-menu and returns to the "Main Service Menu".Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs,das Hauptmenü des service Modes erscheint

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters). Once entered, the tubes geometry and video default vales are immediately activated. Variable geometry and video parameters are written to the NVM when the "STORE" line is selected.
See table below for tube type numbers.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramétres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach Tausch des NVM den bildröhrentyp (6 Ziffern) auswählen. Die neuen Geometrie-und Video-defaultwerte werden sofort aktiv. Variable Geometrie- und Videowerte werden durch Speichern mit "STORE" ins NVM geschrieben.
Bildrohrauflistung : siehe unten.

Scegliere il tubo appropriato dopo aver sostituito la NVM; i 6 caratteri che indicano il nuovo tipo di tubo, richiamano i valori video e geometria di default. I parametri per video e geometria vengono caricati nella NVM

Definir el tubo correcto después de haber cambiado el NVM.6 caracteres.Los nuevos valores de tipo de tubo (con la vídeo y la geometría por defecto) se activan inmediatamente. Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

➟ After setting ➟ Store (+) ☑

Tube Name	LIST name	Description
A51EFS83X191	A51EFS	4:3; 21" OT; AK-Mask; Coty-M
A59EHJ43X15	A59EHJ	4:3; 25" MP; AK-Mask; Vector
A66EHJ43X15	A66EHJ	4:3; 28" MP; AK-Mask; Vector
A68EGD038X30	A68EGD	4:3; 29" SF; Invar; Vector
A80AEJ13X01	A80AEJ	4:3; 33" MP AK-Mask; Coty-M
A59EGD048X30	A59EGD	4:3; 25" SF; Invar-Mask; Vector
A68AGA25X01	A68AGA	4:3; 29" VHP; AK-Mask; Coty-M
W66EGV023X015	W56EGV	16:9; 24" SF; Invar-Mask; Vector
W66EGV023X015	W66EGV	16:9; 28" SF; Invar-Mask; Vector
W76EGV023X015	W76EGV	16:9; 32" SF; Invar-Mask; Vector

SETUP

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Clear Prog.
Clears all programmes STORED in memory and RESETS all PICTURE and SOUND settings to the factory default values.
The AUTO INSTALL (out of factory) mode can be initialised by a long press (> 5sec.) of the selection button.

Efface tous les programmes mémorisés. valeurs SON et IMAGES: valeurs usines. Pour sortir des valeurs usine : Selection : Long press:2,5s

Löscht alle Programme und ersetzt alle Ton-und Bildeinstellungen durch Fabrikwerte. Nach erneutem Einschalten erscheint das Installationsmenü. Anwahl: 2,5s drücken

Clear Prog.
Cancella tutti i programmi in memoria.I Valori analogici SUONO E IMMAGINE vengono riportati a livello di default. Per ristabilire le condizioni di uscita fabbrica, selezionare la funzione e premere per 2,5sec

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores análogos de SOUND PICTURE: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

☑ active-aktiv ☐ No active-inaktiv

Kbd. Config
Factory adjusted
Reservé au reglage usine
Reserviert für fabrikeinstellungen
Riservato alla regolazione di fabbrica

Kbd. Config ◁▮▷ Default

WSS Automatic detection of DOLBY surround sound and 16/9 Format pictures via Teletext line number 23 is valid on all programmes.

Sélection du process WSS valid pour tous programmes

WSS (nur bei 16:9 oder Dolby) Auswertung der Zeile 23 zur automatischen Format umschaltung und Dolby umschaltung

Idendificazione "auto-surround" e "format" tramite il televideo, decodificando la riga 23. La selezione di WSS è valida per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑detect.enable- aktiv ☐ disable-inaktiv

GEOMETRY

Return
Closes the sub-menu and returns to the "Main Service Menu".

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

V-Blanking
Press </> on the RCU or VOL+/VOL- on TV front panel.
1.Select the standard 4:3 format and zoom mode 0.
1.Sélectionner le mode zoom standard 4/3 pour tube 4/3
1.Wählen Sie den Standard-Zoom 4:3 bei 4:3 Bildröhren.
1.Selezionare il modo zoom standard 4/3 per tubo 4/3
1.Seleccione el modo de zoom estándar 4/3 para tubo 4/3.
2.Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
2.appliquer une MIRE de BARRE avec seulement une ligne blanche horizontale en milieu de l'ecran
2.Speisen Sie ein Testbild mit nur einem horizontalen Strich in der Bildmitte ein.
2.Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
2.Aplique una plantilla de prueba con sólo una linea blanca horizontal en el centro de la pantalla.
3.Select **"Blanking On"** line of the menu and **ENABLE** (tick) the function, the bottom half of the screen will go black.
3.Positnner dans le mode Service Blanking On la moitié basse de l' ecran devient noire
3.Schalten Sie den Blanking-Mode ein. Die untere Hälfte des Bildschirms wird schwarz.
3.Posizionarsi in modo Service Blanking on; la parte inferiore dello schermo divienta nera
3.Pase al modo Service Blanking On. La mitad inferior de la pantalla se vuelve negra.
4.Select the **"V_Slope"** line of the menu and adjust its value until the centre line of the pattern is just invisible.
4.Aligner "Vertical - Slope" pour que la ligne mediane soit a peine non visible
4.Regeln Sie "V-Slope" so ein, daß die Mittellinie nahezu verschwindet.
4.Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
4.Alinee "Vertical-Slope" para que la linea mediana sea casi invisible.
5.Return to the "Blanking On" line of the menu and DISABLE (un-tick) the function. ☐
5 Revenir à Blanking On et mettre ☐
5.Schalten Sie den Blanking-Mode wieder ein und ☐
5.Ritornare in modo Blanking on e porre ☐
5.Vuelva a "Blanking on" y poner ☐
6.Switch the test pattern signal to the crosshatch geometry pattern.
6.Positioner la mire de quadrillage
6.Speisen Sie ein Gittertestbild ein.
6.Posizionare il monoscopio
6.Coloque la plantilla cuadriculada.
7.Perform the geometry adjustments described below.
7.Effectuer les reglages de geometrie d'écrits ci- dessous
7.Nehmen Sie die Geometrieeinstellung wie unten beschrieben vor:
7.Effettuare le regolazioni di geometria descritte in precedenza
7.Efectúe los ajustes geométricos descritos más abajo.
8.Store /Memoriser **/Speichern** /Memorizzare /Almacene

GEOMETRY

9.Adjust position H.
9.Regler la position H
9.Korrigieren Sie Horizontale Lage.
9.Regolare la posizione H
9.Ajuste la posición H
10.Ajuster l'amplitude H
10.Adjust amplitude H.
10.Korrigieren Sie Horizontal-Amplitude
10 Regolare l'ampiezza H
10.Ajuste la amplitud H
11-12.Correction of EW pincushion distortion.
11-12.Correction de coussin EW
11-12.Korrektur der Ost/West Kissenverzerrung.
11-12.Correzione della distorsione a cuscino EW
11-12.Corrección de la distorsión de cojín EW.
13.Correction of corners (Shape).
13.Correction de coins (Shape)
13.Korrektur der Ecken.
13.Correzione degli angoli (Forma)
13.Corrección de esquinas (Shape)
14.Trapeze. / Trapèze
14 Trapez-Verzerrung.
14.Trapezio / Trapecio

"These adjustments are not necessary for 4:3 tubes in 16:9 mode"
"Pour les tubes 4/3 en mode 16/9, ces reglages ne sont pas necessaire"
"Diese Einstellungen sind nicht für 4:3 Bildröhren im 16:9 Betrieb erforderlich."
"Queste regolazioni non sono necessarie per tubi 4/3 in modo 16/9"
"Estos ajustes no son necesarios para los tubos 4/3 en modo 16/9"

V-Amplitude
V-Position
H-Position
S -Correction S
H-Amplitude
EW - Amplitude
EW - Trapezium
EW -Shape

Correct incorrect

➟ After setting ➟ Store (+) ☑

VIDEO **PAL**

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.
Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Normalise User Settings

Recalls the factory settings for colour, brightness, contrast and sharpness and sets contrast expand to "low".

☑ Factory settings recalled
☐ User settings kept.

R-Cut off* **G-Cut off*** ☼+◑+◑=nom. Grey scale test pattern white =100% grey

R - Drive **G - Drive** **B - Drive** ☼+◑+◑=nom. Grey scale test pattern white =100% white

Peak-White** ☼+◑+◑=nom. Peek white test pattern white =100%

CRT Pin 6,8,11

Blue cathode Blue cathode

Type Tube	[init]	
A51EFS	420	(600max)
A59EHJ	380	(540max)
A59EGD	400	(470max)
A66EHJ	300	(430max)
A68EGD	350	(410max)

Type Tube	[init]	
A80AEJ	240	(340max)
W56EGV	520	(610max)
W66EGV	480	(560max)
W76EGV	300	(350max)

Scal. Brightness ☼+◑ = 50% ◑ = 100% Grey scale test pattern white =100% black

Scal*. Colour ☼+◑+◑=nom. PAL (then SECAM +RGB) 75% Colour bar test pattern via RF.

Blue Cathode CRT F-H

Scal. Contrast factory settings.

IF

AGC
- Minimum noise- Minimum de bruit
- Minimum Rauschen- Rumore minimo
- Minimo ruido

FFi - Bit
Fast filter (IF /PLL)
Filtre rapide (FI /PLL)
Schnelles filter (ZF/PLL)
Filtro rapido (IF /PLL)

☑ Asie
☐ Europ

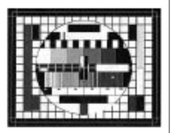
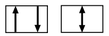
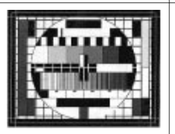
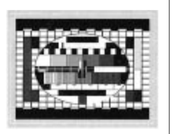
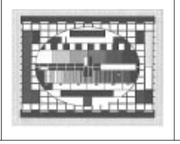
➟ After setting ➟ Store (+) ☑

Note :
* adjust separate for PAL/NTSC/SECAM and RGB/AV getrennte Einstellung für PAL/SEACAM und RGB/AV
* * After PEAK white adjustment control cut off setting. Repeat the adjustments if necessary. Nach der Einstellung von "Peak white" die "Cut off"-Einstellungen wiederholen.

GEOMETRY MODE ALIGNMENT

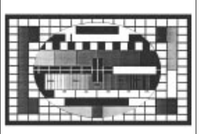
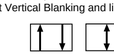
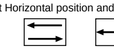
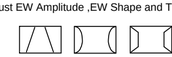
4/3 picture tube

Signal : 4/3 test pattern

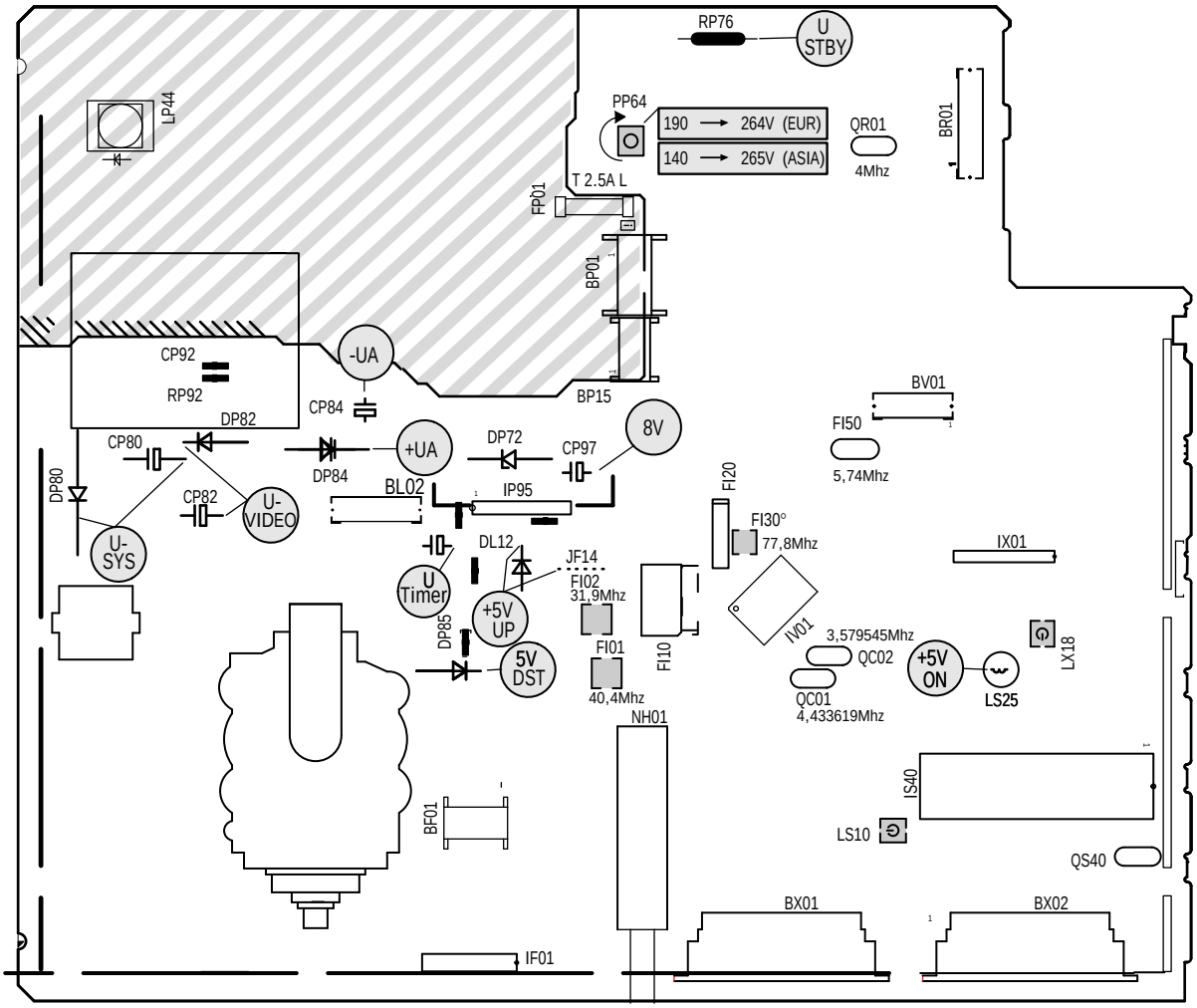
4 / 3 standard mode zoom 0		overscan V=107% , H=107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude 4-Adjust EW Amplitude ,EW Shape and Trapezium
<4/3> zoom 1		overscan V=120% , H=120%
16 / 9 standard mode zoom 0		Adjust the vertical height until V = 80%
<16 / 9> zoom 1		Adjust the vertical height : V =90%

16/9 picture tube

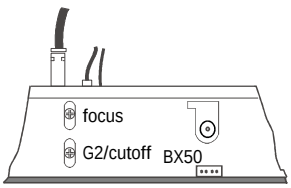
Signal : 4/3 test pattern

16 / 9 standard mode zoom 0		overscan V=107%, H =107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude  4-Adjust EW Amplitude ,EW Shape and Trapezium 

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGOLATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



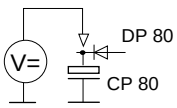
° it is not necessary , to adjust FI30 by after sales

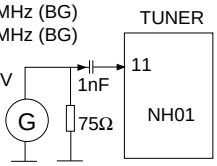


Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectada a la red.

⚠ Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un trasformatore per isolarvi dalla rete

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

<table>
<tr>
<td>U Sys</td>
<td>PP 64</td>
<td>+ + = 50%</td>
<td> 
</td>
<td>
<table>
<tr><th>Tube</th><th>Format</th><th>Usys</th><th>Jumper</th><th>RL65</th></tr>
<tr><td>A51EFS83X191</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A59EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A66EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A59EGD048X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68EGD038X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68AGA25X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A80AEJ15X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>W56EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W66EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W76EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
</table>
</td>
</tr>
<tr>
<td rowspan="2">IF Alignment
Alignement FI</td>
<td>trap 40,4Mhz
FI 01</td>
<td rowspan="2">Switch set to standard BG
Commuter le TV au standard BG

IF Signal
40,4MHz (BG)
31,9MHz (BG)
 
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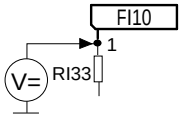
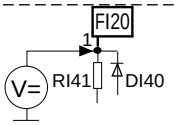
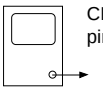
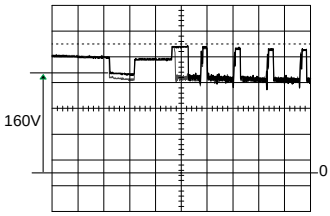
<td> 
</td>
<td>Adjust FI01 for minimum value at 40,4Mhz</td>
</tr>
<tr>
<td>trap 31,9Mhz
FI 02</td>
<td> 
</td>
<td>Adjust FI20 for minimum value at 31,9Mhz</td>
</tr>
<tr>
<td>U G2 / cutoff</td>
<td>SCREEN</td>
<td>+ + = 50%

AV (no Signal, black screen)</td>
<td> 
CRT IB01:
pins 9 / 12 / 15
highest output</td>
<td> 
</td>
</tr>
<tr>
<td>FOCUS</td>
<td>FOCUS
LL05</td>
<td> Test pattern
(standard values)</td>
<td> </td>
<td>Sharp picture</td>
</tr>
</table>

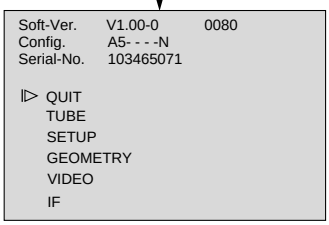
SERVICE MODE (GB) — MODE SERVICE (F)

I - ENTER/EXIT SERVICE MODE - ENTREE/SORTIE DU MODE SERVICE

1 ACCESSING THE SERVICE MODE

TV Control Panel Access

- Switch the TV into **"Standby"** mode by pressing the Standby button on the RCU.
- Switch **"OFF"** the mains supply to the TV and wait for the LED to extinguish.
- Whilst holding depressed the **PR -** and **VOL-** (8s), switch **"ON"** the mains supply to the TV.
- Once initialised, the **Main Service Menu** will appear on the screen of the TV.



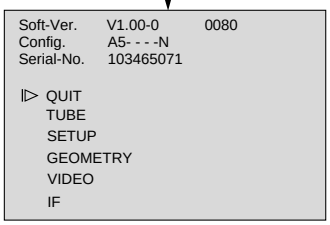
Please Note:

In the service mode :
- *The CHILD LOCK function is re-initialised.The LOCK function (PIN number) is ignored.*
- *All Wake-up/Sleep timer settings are CLEARED.*
- *SCART socket pin 8 switching voltages are ignored.*
- *AV-Link, WSS Detection, EPG and TELETEXT functions are disabled.*
- *Automatic standby mode switching functions (no signal conditions) are disabled.*
- *Brightness, Colour and Contrast are set to factory defaults.*
- *Sharpness settings are set to MID position.*
- *Contrast Expand is set to LOW.*
- *Automatic INSTALL mode is disabled.*
- *FORMAT and ZOOM are reset to factory defaults.*

1 ACCES AU MODE SERVICE

Accès avec le clavier du téléviseur

- Commuter le téléviseur en position de veille avec la télécommande. Eteindre le téléviseur par l'interrupteur secteur (attendre l'extinction complète du voyant).
- Tout en appuyant sur les touches **PR -** et **VOL - ,** mettre le TV en service à l'aide de la touche **M/A**.
- Maintenir enfoncées les touches **PR -** et **VOL -**. (8s) Le menu suivant apparaît.



Note :

En mode service:
- *Le verrouillage parental est effacé (réinitialisé).*
- *La fonction de verrouillage (Pin number) est ignorée.*
- *La programmation des heures «reveille/matin» est annulée.*
- *Possibilité de passer en mode service avec commutation lente active.*
- *AV- Link , la détection WSS, l'EPG et le Vidéotexte ne sont pas validés.*
- *La fonction de stand-by automatique en cas d'absence de signal d'antenne n'est pas validée.*
- *Les valeurs de réglages usine sont affectées au contraste, à la couleur et à la lumière.*
- *Le contour est appelé à sa valeur moyenne.*
- *L'expansion contraste est au niveau bas.*
- *Le mode ambiance «Light sensor» n'est pas valides.*
- *Zoom et format ignorées.*

2 TEMPORARY EXIT FROM SERVICE MODE

- Press the **"EXIT"** button on the RCU.
- Pressing the **"MENU"** button on the RCU will activate the customer menus.

- The Service Menu can be re-entered by pressing the "BLUE" button on the RCU.

2 SORTIE TEMPORAIRE DU MODE SERVICE

- Utiliser la touche Exit de la télécommande.
- Le menu utilisateur peut être accessible via la touche «Menu».

- Pour entrer à nouveau dans le mode service utliliser la touche bleue.

3 EXITING FROM SERVICE MODE

Remote Control — **TV Control Panel** — **ON/OFF key or "Stand-by" buttons**

- Select the **"QUIT"** line of the **"Main Service Menu".**
- RCU **"Standby"** button or switch **"OFF"** mains supply.
- Press «<», «OK» or «>» button
- Press «VOL.+»button
- TV mode.

*Values or adjustment not **"STORED"** before exiting the service mode will **NOT** be **"SAVED"** in the NVM.*

3 SORTIE DEFINITIVE DU MODE SERVICE

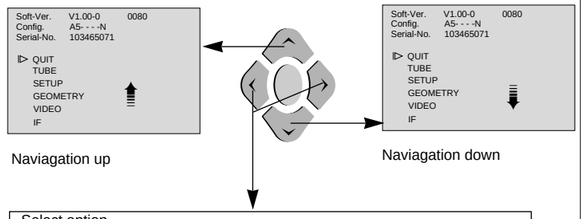
télécommande — **clavier du téléviseur** — **Inter M/A ou Stand-by**

- Aller au point «QUIT» dans le menu principal du mode service.
- Foncion Stand-by ou «off» par M/A
- Appuyer sur «<», «OK» ou «>»
- Appuyer sur «VOL+»
- Mode TV.

Les valeurs ou réglages non mémorisées avant la sortie ne seront pas écrites en NVM.

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE
FUNCTIONS WALLIN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



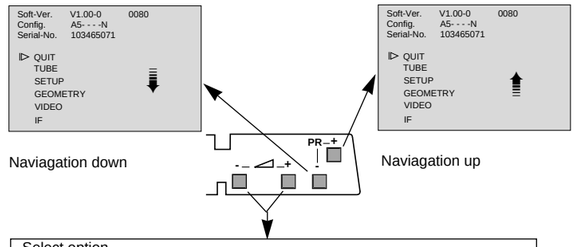
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

> → VALUE

< → VALUE

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE -



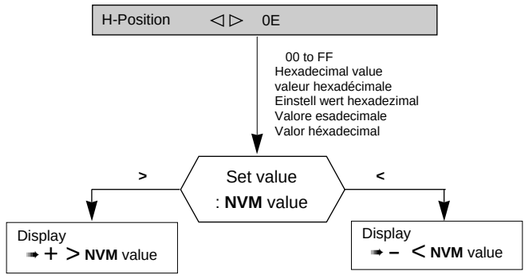
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE

Vol. – → VALUE

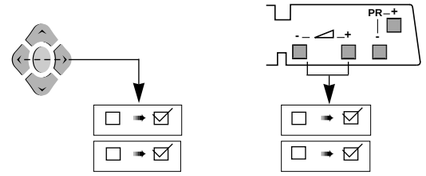
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELL WERTS VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALT FUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☑ the box.
Pour valider une fonction cocher ☑ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☑ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☑ la casella
Para poner en fucionamiento una función verifique (señale) ☑ la casilla

☑ : :Enable function ☐ : Disable function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☑
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati provvisoriamente sulla RAM
Durante el ajuste, los valores son almacenados temporalmente en RAM

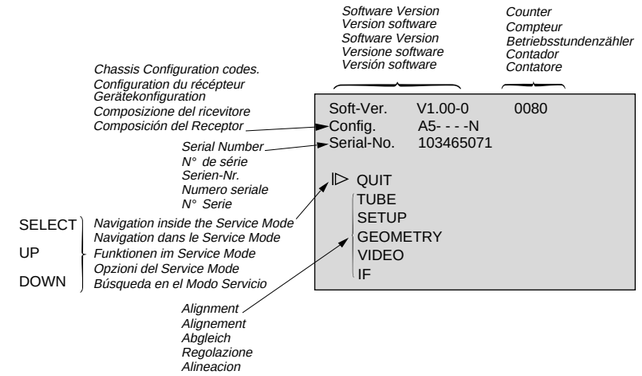
Store ➠ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Werts von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➠ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in den RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

ROM Default ➠ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden im RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL



TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÕN DEL TV

Config.	A1Z-DKC

Character 1 : Tube type : «A»= 4/3 , «W» =16/9
Character 2 : Chassis type : «5» = 50Hz,
Character 3 : Zoom available : «Z»=yes, «-»=not
Character 4 : Ambiant Sensor : «S»= detected, «-»= not
Character 5 : Dolby : «D»=detected, «-»= not
Character 6 : AV Link detected : «K»=IR link detected, «-»= not
Character 7 : Chassis Variant: «N»= Nicam, «S»=Stereo

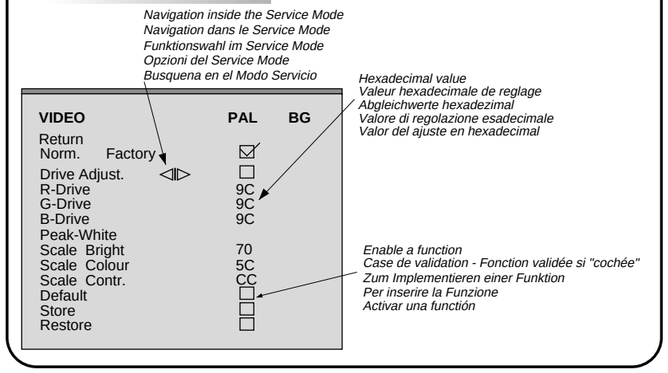
Serial-N0.	AI6------

Character 1 : Factory : «A»= Angers , «C» =Celle, «T» =Tarancon
Character 2 : Year : «G» = 1996, «H»= 1997 etc..
Character 3 : Month, from : «1»=January to «C»=December
Character 4-9 : Serial N0.

TIME COUNTER - COMPTEUR DE TEMPS - BETRIEBSSTUNDENZÄHLER - CONTATORE - CONTADOR

The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contatore da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

TUBE
Return
Tube type A66ECY...
Store ◁▮▷ ☑
Restore ☐

SETUP
Return
Clear Progs. ▮▷
Kbd. Config. Default
WSS ☐
Default ☐
Store ☐
Restore ☐

GEOMETRY
Return
V- Slope 7C
V-Amplitude 6C
V-Position ◁▮▷ 7C
Blanking On ☐
S - Correction 54
H-Position 94
H-Amplitude 70
EW-Amplitude 78
EW-Trapezium 98
Default ☐
Store ☐
Restore ☐

VIDEO **PAL** **BG**
Return
Norm. Factory ☑
Drive Adjust. ◁▮▷ ☐
R-Drive 9C
G-Drive 9C
B-Drive 9C
Peak-White
Scale Bright 70
Scale Colour 5C
Scale Contr. CC
Default ☐
Store ☐
Restore ☐

IF
Return
AGC Take Over ◁▮▷ 88
FFI - Bit ☐
Default ☑
Store ☑
Restore ☑

Test Pattern Signal used: 4/3 with geometric circle. *Adjust separate for 4/3 and 16/9 format. See annexed* *The signals colour standard is auto detected and displayed opposite the main menu line.*

TUBE

Return
Closes the sub-menu and returns to the "Main Service Menu".Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs,das Hauptmenü des service Modes erscheint

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters). Once entered, the tubes geometry and video default vales are immediately activated. Variable geometry and video parameters are written to the NVM when the "STORE" line is selected.
See table below for tube type numbers.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramétres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach Tausch des NVM den bildröhrentyp (6 Ziffern) auswählen. Die neuen Geometrie-und Video-defaultwerte werden sofort aktiv. Variable Geometrie- und Videowerte werden durch Speichern mit "STORE" ins NVM geschrieben.
Bildrohrauflistung : siehe unten.

Scegliere il tubo appropriato dopo aver sostituito la NVM; i 6 caratteri che indicano il nuovo tipo di tubo, richiamano i valori video e geometria di default. I parametri per video e geometria vengono caricati nella NVM

Definir el tubo correcto después de haber cambiado el NVM.6 caracteres.Los nuevos valores de tipo de tubo (con la vídeo y la geometría por defecto) se activan inmediatamente. Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

➟ After setting ➟ Store (+) ☑

Tube Name	LIST name	Description
A51EFS83X191	A51EFS	4:3; 21" OT; AK-Mask; Coty-M
A59EHJ43X15	A59EHJ	4:3; 25" MP; AK-Mask; Vector
A66EHJ43X15	A66EHJ	4:3; 28" MP; AK-Mask; Vector
A68EGD038X30	A68EGD	4:3; 29" SF; Invar; Vector
A80AEJ13X01	A80AEJ	4:3; 33" MP AK-Mask; Coty-M
A59EGD048X30	A59EGD	4:3; 25" SF; Invar-Mask; Vector
A68AGA25X01	A68AGA	4:3; 29" VHP; AK-Mask; Coty-M
W66EGV023X015	W56EGV	16:9; 24" SF; Invar-Mask; Vector
W66EGV023X015	W66EGV	16:9; 28" SF; Invar-Mask; Vector
W76EGV023X015	W76EGV	16:9; 32" SF; Invar-Mask; Vector

SETUP

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Clear Prog.
Clears all programmes STORED in memory and RESETS all PICTURE and SOUND settings to the factory default values.
The AUTO INSTALL (out of factory) mode can be initialised by a long press (> 5sec.) of the selection button.

Efface tous les programmes mémorisés. valeurs SON et IMAGES: valeurs usines. Pour sortir des valeurs usine : Selection : Long press:2,5s

Löscht alle Programme und ersetzt alle Ton-und Bildeinstellungen durch Fabrikwerte. Nach erneutem Einschalten erscheint das Installationsmenü. Anwahl: 2,5s drücken

Clear Prog.
Cancella tutti i programmi in memoria.I Valori analogici SUONO E IMMAGINE vengono riportati a livello di default. Per ristabilire le condizioni di uscita fabbrica, selezionare la funzione e premere per 2,5sec

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores análogos de SOUND PICTURE: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

☑ active-aktiv ☐ No active-inaktiv

Kbd. Config
Factory adjusted
Reservé au reglage usine
Reserviert für fabrikeinstellungen
Riservato alla regolazione di fabbrica

Kbd. Config ◁▮▷ Default

WSS Automatic detection of DOLBY surround sound and 16/9 Format pictures via Teletext line number 23 is valid on all programmes.

Sélection du process WSS valid pour tous programmes

WSS (nur bei 16:9 oder Dolby) Auswertung der Zeile 23 zur automatischen Format umschaltung und Dolby umschaltung

Idendificazione "auto-surround" e "format" tramite il televideo, decodificando la riga 23. La selezione di WSS è valida per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑detect.enable- aktiv ☐ disable-inaktiv

GEOMETRY

Return
Closes the sub-menu and returns to the "Main Service Menu".

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

V-Blanking
Press </> on the RCU or VOL+/VOL- on TV front panel.
1.Select the standard 4:3 format and zoom mode 0.
1.Sélectionner le mode zoom standard 4/3 pour tube 4/3
1.Wählen Sie den Standard-Zoom 4:3 bei 4:3 Bildröhren.
1.Selezionare il modo zoom standard 4/3 per tubo 4/3
1.Seleccione el modo de zoom estándar 4/3 para tubo 4/3.
2.Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
2.appliquer une MIRE de BARRE avec seulement une ligne blanche horizontale en milieu de l'ecran
2.Speisen Sie ein Testbild mit nur einem horizontalen Strich in der Bildmitte ein.
2.Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
2.Aplique una plantilla de prueba con sólo una linea blanca horizontal en el centro de la pantalla.
3.Select **"Blanking On"** line of the menu and **ENABLE** (tick) the function, the bottom half of the screen will go black.
3.Positnner dans le mode Service Blanking On la moitié basse de l' ecran devient noire
3.Schalten Sie den Blanking-Mode ein. Die untere Hälfte des Bildschirms wird schwarz.
3.Posizionarsi in modo Service Blanking on; la parte inferiore dello schermo divienta nera
3.Pase al modo Service Blanking On. La mitad inferior de la pantalla se vuelve negra.
4.Select the **"V_Slope"** line of the menu and adjust its value until the centre line of the pattern is just invisible.
4.Aligner "Vertical - Slope" pour que la ligne mediane soit a peine non visible
4.Regeln Sie "V-Slope" so ein, daß die Mittellinie nahezu verschwindet.
4.Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
4.Alinee "Vertical-Slope" para que la linea mediana sea casi invisible.
5.Return to the "Blanking On" line of the menu and DISABLE (un-tick) the function. ☐
5 Revenir à Blanking On et mettre ☐
5.Schalten Sie den Blanking-Mode wieder ein und ☐
5.Ritornare in modo Blanking on e porre ☐
5.Vuelva a "Blanking on" y poner ☐
6.Switch the test pattern signal to the crosshatch geometry pattern.
6.Positioner la mire de quadrillage
6.Speisen Sie ein Gittertestbild ein.
6.Posizionare il monoscopio
6.Coloque la plantilla cuadriculada.
7.Perform the geometry adjustments described below.
7.Effectuer les reglages de geometrie d'écrits ci- dessous
7.Nehmen Sie die Geometrieeinstellung wie unten beschrieben vor:
7.Effettuare le regolazioni di geometria descritte in precedenza
7.Efectúe los ajustes geométricos descritos más abajo.
8.Store /Memoriser **/Speichern** /Memorizzare /Almacene

GEOMETRY

9.Adjust position H.
9.Regler la position H
9.Korrigieren Sie Horizontale Lage.
9.Regolare la posizione H
9.Ajuste la posición H
10.Ajuster l'amplitude H
10.Adjust amplitude H.
10.Korrigieren Sie Horizontal-Amplitude
10 Regolare l'ampiezza H
10.Ajuste la amplitud H
11-12.Correction of EW pincushion distortion.
11-12.Correction de coussin EW
11-12.Korrektur der Ost/West Kissenverzerrung.
11-12.Correzione della distorsione a cuscino EW
11-12.Corrección de la distorsión de cojín EW.
13.Correction of corners (Shape).
13.Correction de coins (Shape)
13.Korrektur der Ecken.
13.Correzione degli angoli (Forma)
13.Corrección de esquinas (Shape)
14.Trapeze. / Trapèze
14 Trapez-Verzerrung.
14.Trapezio / Trapecio

"These adjustments are not necessary for 4:3 tubes in 16:9 mode"
"Pour les tubes 4/3 en mode 16/9, ces reglages ne sont pas necessaire"
"Diese Einstellungen sind nicht für 4:3 Bildröhren im 16:9 Betrieb erforderlich."
"Queste regolazioni non sono necessarie per tubi 4/3 in modo 16/9"
"Estos ajustes no son necesarios para los tubos 4/3 en modo 16/9"

V-Amplitude
V-Position
H-Position
S -Correction S
H-Amplitude
EW - Amplitude
EW - Trapezium
EW -Shape

Correct incorrect

➟ After setting ➟ Store (+) ☑

VIDEO **PAL**

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.
Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Normalise User Settings

Recalls the factory settings for colour, brightness, contrast and sharpness and sets contrast expand to "low".

☑ Factory settings recalled
☐ User settings kept.

R-Cut off* **G-Cut off*** ☼+◑+◑=nom. Grey scale test pattern white =100% grey

R - Drive **G - Drive** **B - Drive** ☼+◑+◑=nom. Grey scale test pattern white =100% white

Peak-White** ☼+◑+◑=nom. Peek white test pattern white =100%

CRT Pin 6,8,11

Blue cathode Blue cathode

Type Tube	[init]	
A51EFS	420	(600max)
A59EHJ	380	(540max)
A59EGD	400	(470max)
A66EHJ	300	(430max)
A68EGD	350	(410max)

Type Tube	[init]	
A80AEJ	240	(340max)
W56EGV	520	(610max)
W66EGV	480	(560max)
W76EGV	300	(350max)

Scal. Brightness ☼+◑ = 50% ◑ = 100% Grey scale test pattern white =100% black

Scal*. Colour ☼+◑+◑=nom. PAL (then SECAM +RGB) 75% Colour bar test pattern via RF.

Blue Cathode CRT F-H

Scal. Contrast factory settings.

IF

AGC
- Minimum noise- Minimum de bruit
- Minimum Rauschen- Rumore minimo
- Minimo ruido

FFi - Bit
Fast filter (IF /PLL)
Filtre rapide (FI /PLL)
Schnelles filter (ZF/PLL)
Filtro rapido (IF /PLL)

☑ Asie
☐ Europ

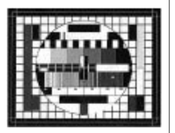
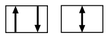
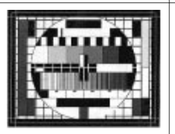
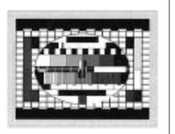
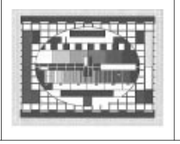
➟ After setting ➟ Store (+) ☑

Note :
* adjust separate for PAL/NTSC/SECAM and RGB/AV getrennte Einstellung für PAL/SEACAM und RGB/AV
* * After PEAK white adjustment control cut off setting. Repeat the adjustments if necessary. Nach der Einstellung von "Peak white" die "Cut off"-Einstellungen wiederholen.

GEOMETRY MODE ALIGNMENT

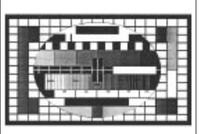
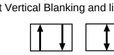
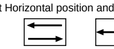
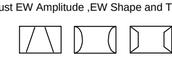
4/3 picture tube

Signal : 4/3 test pattern

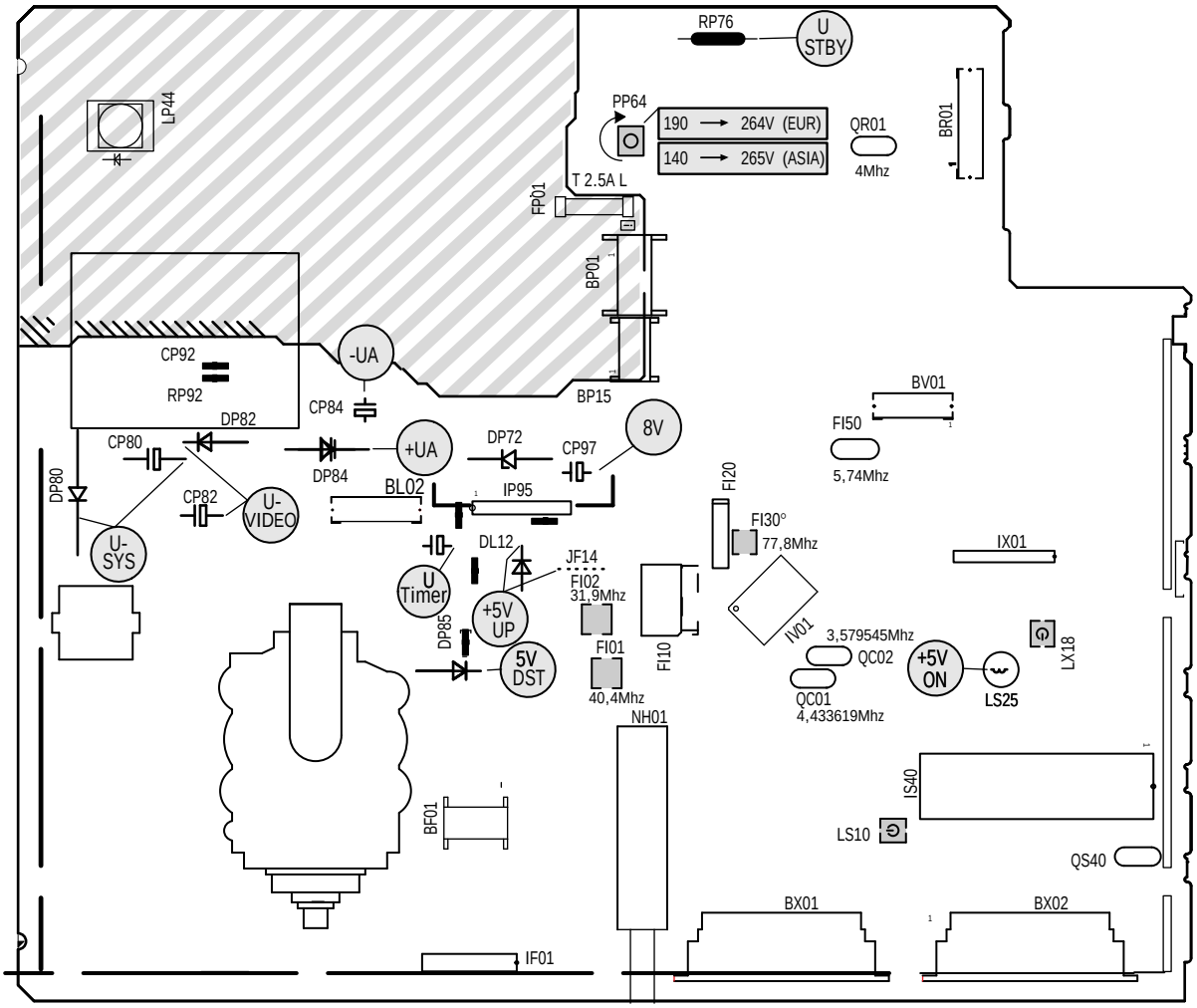
4 / 3 standard mode zoom 0		overscan V=107% , H=107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude 4-Adjust EW Amplitude ,EW Shape and Trapezium
<4/3> zoom 1		overscan V=120% , H=120%
16 / 9 standard mode zoom 0		Adjust the vertical height until V = 80%
<16 / 9> zoom 1		Adjust the vertical height : V =90%

16/9 picture tube

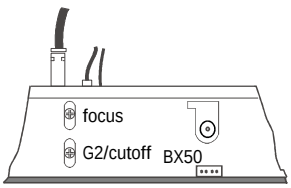
Signal : 4/3 test pattern

16 / 9 standard mode zoom 0		overscan V=107%, H =107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude  4-Adjust EW Amplitude ,EW Shape and Trapezium 

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGOLATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



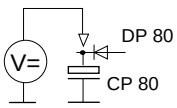
° it is not necessary , to adjust FI30 by after sales

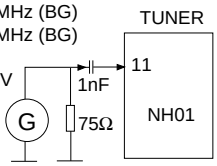
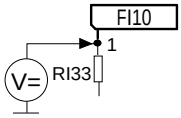
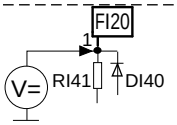


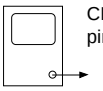
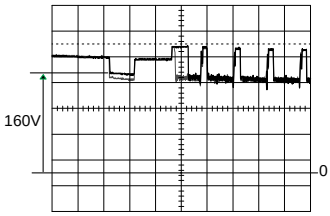
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectada a la red.

⚠ Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un trasformatore per isolarvi dalla rete

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

<table>
<tr>
<td>U Sys</td>
<td>PP 64</td>
<td>+ + = 50%</td>
<td> 
</td>
<td>
<table>
<tr><th>Tube</th><th>Format</th><th>Usys</th><th>Jumper</th><th>RL65</th></tr>
<tr><td>A51EFS83X191</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A59EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A66EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A59EGD048X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68EGD038X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68AGA25X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A80AEJ15X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>W56EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W66EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W76EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
</table>
</td>
</tr>
<tr>
<td rowspan="2">IF Alignment
Alignement FI</td>
<td>trap 40,4Mhz
FI 01</td>
<td rowspan="2">Switch set to standard BG
Commuter le TV au standard BG

IF Signal
40,4MHz (BG)
31,9MHz (BG)
 
</td>
<td> 
</td>
<td>Adjust FI01 for minimum value at 40,4Mhz</td>
</tr>
<tr>
<td>trap 31,9Mhz
FI 02</td>
<td> 
</td>
<td>Adjust FI20 for minimum value at 31,9Mhz</td>
</tr>
<tr>
<td>U G2 / cutoff</td>
<td>SCREEN</td>
<td>+ + = 50%

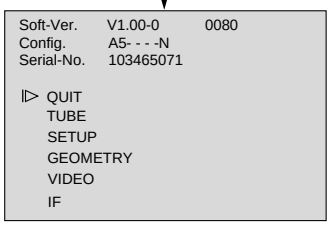
AV (no Signal, black screen)</td>
<td> 
CRT IB01:
pins 9 / 12 / 15
highest output</td>
<td> 
</td>
</tr>
<tr>
<td>FOCUS</td>
<td>FOCUS
LL05</td>
<td> Test pattern
(standard values)</td>
<td> </td>
<td>Sharp picture</td>
</tr>
</table>

I - EIN-AUSTIEG SERVICE MODE - ACCESSO/USCITA ALLA/DALLA FUNZIONE

1 EINSTIEG IN DEN SERVICE MODE

Zugriff über die Tastatur des Fernsehgeräts

- Mit der Fernbedienung das Fernsehgerät in Stand-by schalten. Das Gerät mit dem Netzschalter ausschalten (warten bis LED dunkel ist)
- Gleichzeitig die Tasten **PR-** und **VOL-** drücken und den TV über die EIN/AUS-Taste einschalten.
- Die Tasten **PR-** und **VOL-** (8s) gedrückt halten.



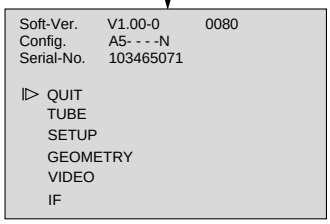
Anmerkung :

Im SERVICE MODE :
- *wird die Sperrfunktion (PIN-Nummer) ignoriert und die Kindersicherung gelöscht (reinitialisiert).*
- *werden alle Ein- und Ausschaltzeitgeber gelöscht.*
- *wird die SCART - Schaltspannung ignoriert.*
- *werden AV- Link WSS, EPG und Teletext gesperrt*
- *wird die automatische Abschaltung bei fehlendem Antennensignal gesperrt.*
- *werden Kontrast, Farbe und Helligkeit auf Standardwerte gesetzt.*
- *wird die ßildschärfe auf Mittelstellung (nominal) gesetzt.*
- *wird der Kontrast-Expander auf "gering.." gesetzt.*
- *wird das Standardformat bzw. der Standard-Zoom modus gewählt.*

1 ACCESSO AL SERVICE MODE

tramite i comandi del televisore

- Commutare il televisore in stand-by con il telecomando. Spegnere l'apparecchio con l'interruttore di rete (attendere finchè il LED è spento)
- Tenere premuti i tasti **PR- e VOL-** accendendo il TV con il pulsante ON/OFF.
- Premere i pulsanti **PR - e VOL-** (8s).



Nota :

Nel service mode:
- *la funzione Blocco (Numero Pin) viene ignorata e la funzione Blocco Bambini è reinizializzata.*
- *Cancella la programmazione sveglia*
- *Il piedino 8 della scart deve essere ignorato.*
- *I riconoscimenti AV-Link WSS, EPG e televideo non sono abilitati.*
- *Nel caso di mancanza di segnale d'antenna, la funzione automatica di standby é disabilitata.*
- *Contrasto, colore, luminosità : regolazioni di fabbrica.*
- *Nitidezza: media (nominale)*
- *L'espansore contrasto é a livello basso.*
- *Zoom e formato a livello.*

2 VORÜBERGEHENDES VERLASSEN DES SERVICE MODE

- Auf der Fernbedienung EXIT drücken.
- Mit der Taste Menü gelangen Sie zum Menü Übersicht

- Mit der blauen Taste gelangen sie zum Service-Menü.

2 USCITA TEMPORANEA DAL SERVICE MODE

- Premere Exit sul telecomando.
- Al menu di uso quotidiano si accede attraverso il pulsante Menu.

- É possibile rientrare nel Menu Field Service attraverso il pulsante Blu.

3 ENDGÜLTIGES VERLASSEN DES SERVICE MODE

Fernbedienung | **TV-Bedienfeld** | **EIN /Aus - Taste**

- Wenn der Zeiger im Hauptmenü des Service-Modus auf BEENDEN steht
- Mit Standby-Funktion oder **EIN/AUS** - taste ausschalten
- Taste «<», «OK» oder «>»drücken
- Taste «VOL+» drücken
- TV Modus

Werte und Einstellungen, die nicht vor dem Verlassen des Service-Modus gespeichert wurden, werden nicht in den Permanentspeicher übernommen

3 USCIRE DAL SERVICE MODE

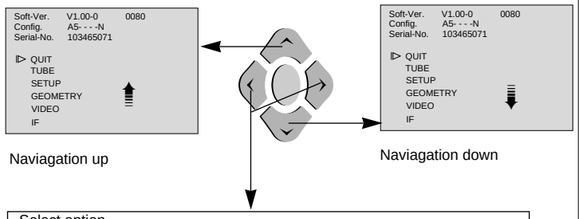
telecomando | **Pannello controllo TV** | **Tasto on/off o standby**

- Andare al punto QUIT nel Modo Field service del Menu principale
- Funzione Stand-by o «off» con il tasto on/off
- Premere «<»,«OK» o «>»
- Premere «VOL.+»
- Modo TV.

I Valori e regolazioni non memorizzate prima di uscire dal Service Mode. Non vengono scritti nella NVM

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE
FUNCTIONS WALLIN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



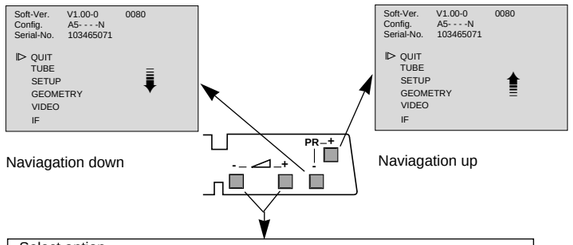
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

> → VALUE

< → VALUE

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE -



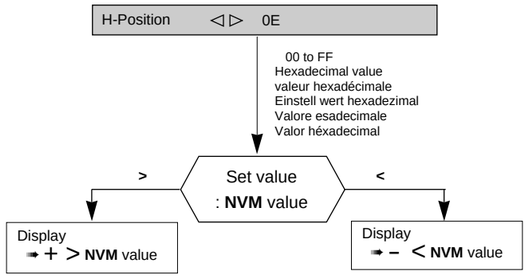
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE

Vol. – → VALUE

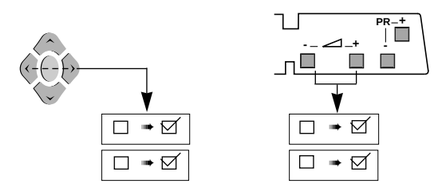
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELL WERTS VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALT FUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☑ the box.
Pour valider une fonction cocher ☑ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☑ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☑ la casella
Para poner en fucionamiento una función verifique (señale) ☑ la casilla

☑ : :Enable function ☐ : Disable function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☑
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati provvisoriamente sulla RAM
Durante el ajuste, los valores son almacenados temporalmente en RAM

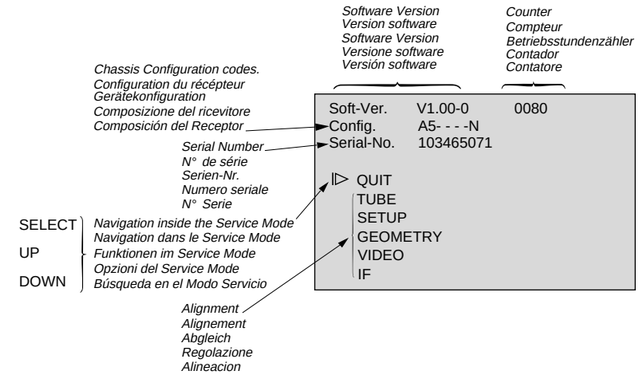
Store ➠ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Werts von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➠ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in den RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

ROM Default ➠ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden im RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL



TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÕN DEL TV

Config.	A1Z-DKC

Character 1 : Tube type : «A»= 4/3 , «W» =16/9
Character 2 : Chassis type : «5» = 50Hz,
Character 3 : Zoom available : «Z»=yes, «-»=not
Character 4 : Ambiant Sensor : «S»= detected, «-»= not
Character 5 : Dolby : «D»=detected, «-»= not
Character 6 : AV Link detected : «K»=IR link detected, «-»= not
Character 7 : Chassis Variant: «N»= Nicam, «S»=Stereo

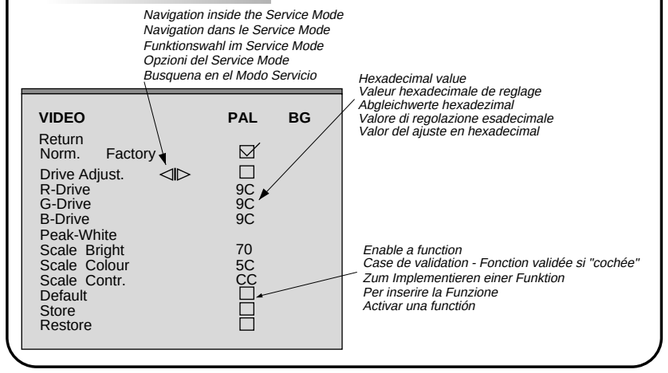
Serial-N0.	AI6------

Character 1 : Factory : «A»= Angers , «C» =Celle, «T» =Tarancon
Character 2 : Year : «G» = 1996, «H»= 1997 etc..
Character 3 : Month, from : «1»=January to «C»=December
Character 4-9 : Serial N0.

TIME COUNTER - COMPTEUR DE TEMPS - BETRIEBSSTUNDENZÄHLER - CONTATORE - CONTADOR

The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contatore da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

TUBE
Return
Tube type A66ECY...
Store ◁▮▷ ☑
Restore ☐

SETUP
Return
Clear Progs. ▮▷
Kbd. Config. Default
WSS ☐
Default ☐
Store ☐
Restore ☐

GEOMETRY
Return
V- Slope 7C
V-Amplitude 6C
V-Position ◁▮▷ 7C
Blanking On ☐
S - Correction 54
H-Position 94
H-Amplitude 70
EW-Amplitude 78
EW-Trapezium 98
Default ☐
Store ☐
Restore ☐

VIDEO **PAL** **BG**
Return
Norm. Factory ☑
Drive Adjust. ◁▮▷ ☐
R-Drive 9C
G-Drive 9C
B-Drive 9C
Peak-White
Scale Bright 70
Scale Colour 5C
Scale Contr. CC
Default ☐
Store ☐
Restore ☐

IF
Return
AGC Take Over ◁▮▷ 88
FFI - Bit ☐
Default ☑
Store ☑
Restore ☑

Test Pattern Signal used: 4/3 with geometric circle. *Adjust separate for 4/3 and 16/9 format. See annexed* *The signals colour standard is auto detected and displayed opposite the main menu line.*

TUBE

Return
Closes the sub-menu and returns to the "Main Service Menu".Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs,das Hauptmenü des service Modes erscheint

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters). Once entered, the tubes geometry and video default vales are immediately activated. Variable geometry and video parameters are written to the NVM when the "STORE" line is selected.
See table below for tube type numbers.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramétres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach Tausch des NVM den bildröhrentyp (6 Ziffern) auswählen. Die neuen Geometrie-und Video-defaultwerte werden sofort aktiv. Variable Geometrie- und Videowerte werden durch Speichern mit "STORE" ins NVM geschrieben.
Bildrohrauflistung : siehe unten.

Scegliere il tubo appropriato dopo aver sostituito la NVM; i 6 caratteri che indicano il nuovo tipo di tubo, richiamano i valori video e geometria di default. I parametri per video e geometria vengono caricati nella NVM

Definir el tubo correcto después de haber cambiado el NVM.6 caracteres.Los nuevos valores de tipo de tubo (con la vídeo y la geometría por defecto) se activan inmediatamente. Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

➟ After setting ➟ Store (+) ☑

Tube Name	LIST name	Description
A51EFS83X191	A51EFS	4:3; 21" OT; AK-Mask; Coty-M
A59EHJ43X15	A59EHJ	4:3; 25" MP; AK-Mask; Vector
A66EHJ43X15	A66EHJ	4:3; 28" MP; AK-Mask; Vector
A68EGD038X30	A68EGD	4:3; 29" SF; Invar; Vector
A80AEJ13X01	A80AEJ	4:3; 33" MP AK-Mask; Coty-M
A59EGD048X30	A59EGD	4:3; 25" SF; Invar-Mask; Vector
A68AGA25X01	A68AGA	4:3; 29" VHP; AK-Mask; Coty-M
W66EGV023X015	W56EGV	16:9; 24" SF; Invar-Mask; Vector
W66EGV023X015	W66EGV	16:9; 28" SF; Invar-Mask; Vector
W76EGV023X015	W76EGV	16:9; 32" SF; Invar-Mask; Vector

SETUP

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Clear Prog.
Clears all programmes STORED in memory and RESETS all PICTURE and SOUND settings to the factory default values.
The AUTO INSTALL (out of factory) mode can be initialised by a long press (> 5sec.) of the selection button.

Efface tous les programmes mémorisés. valeurs SON et IMAGES: valeurs usines. Pour sortir des valeurs usine : Selection : Long press:2,5s

Löscht alle Programme und ersetzt alle Ton-und Bildeinstellungen durch Fabrikwerte. Nach erneutem Einschalten erscheint das Installationsmenü. Anwahl: 2,5s drücken

Clear Prog.
Cancella tutti i programmi in memoria.I Valori analogici SUONO E IMMAGINE vengono riportati a livello di default. Per ristabilire le condizioni di uscita fabbrica, selezionare la funzione e premere per 2,5sec

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores análogos de SOUND PICTURE: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

☑ active-aktiv ☐ No active-inaktiv

Kbd. Config
Factory adjusted
Reservé au reglage usine
Reserviert für fabrikeinstellungen
Riservato alla regolazione di fabbrica

Kbd. Config ◁▮▷ Default

WSS Automatic detection of DOLBY surround sound and 16/9 Format pictures via Teletext line number 23 is valid on all programmes.

Sélection du process WSS valid pour tous programmes

WSS (nur bei 16:9 oder Dolby) Auswertung der Zeile 23 zur automatischen Format umschaltung und Dolby umschaltung

Idendificazione "auto-surround" e "format" tramite il televideo, decodificando la riga 23. La selezione di WSS è valida per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑detect.enable- aktiv ☐ disable-inaktiv

GEOMETRY

Return
Closes the sub-menu and returns to the "Main Service Menu".

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

V-Blanking
Press </> on the RCU or VOL+/VOL- on TV front panel.
1.Select the standard 4:3 format and zoom mode 0.
1.Sélectionner le mode zoom standard 4/3 pour tube 4/3
1.Wählen Sie den Standard-Zoom 4:3 bei 4:3 Bildröhren.
1.Selezionare il modo zoom standard 4/3 per tubo 4/3
1.Seleccione el modo de zoom estándar 4/3 para tubo 4/3.
2.Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
2.appliquer une MIRE de BARRE avec seulement une ligne blanche horizontale en milieu de l'ecran
2.Speisen Sie ein Testbild mit nur einem horizontalen Strich in der Bildmitte ein.
2.Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
2.Aplique una plantilla de prueba con sólo una linea blanca horizontal en el centro de la pantalla.
3.Select **"Blanking On"** line of the menu and **ENABLE** (tick) the function, the bottom half of the screen will go black.
3.Positnner dans le mode Service Blanking On la moitié basse de l' ecran devient noire
3.Schalten Sie den Blanking-Mode ein. Die untere Hälfte des Bildschirms wird schwarz.
3.Posizionarsi in modo Service Blanking on; la parte inferiore dello schermo divienta nera
3.Pase al modo Service Blanking On. La mitad inferior de la pantalla se vuelve negra.
4.Select the **"V_Slope"** line of the menu and adjust its value until the centre line of the pattern is just invisible.
4.Aligner "Vertical - Slope" pour que la ligne mediane soit a peine non visible
4.Regeln Sie "V-Slope" so ein, daß die Mittellinie nahezu verschwindet.
4.Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
4.Alinee "Vertical-Slope" para que la linea mediana sea casi invisible.
5.Return to the "Blanking On" line of the menu and DISABLE (un-tick) the function. ☐
5 Revenir à Blanking On et mettre ☐
5.Schalten Sie den Blanking-Mode wieder ein und ☐
5.Ritornare in modo Blanking on e porre ☐
5.Vuelva a "Blanking on" y poner ☐
6.Switch the test pattern signal to the crosshatch geometry pattern.
6.Positioner la mire de quadrillage
6.Speisen Sie ein Gittertestbild ein.
6.Posizionare il monoscopio
6.Coloque la plantilla cuadriculada.
7.Perform the geometry adjustments described below.
7.Effectuer les reglages de geometrie d'écrits ci- dessous
7.Nehmen Sie die Geometrieeinstellung wie unten beschrieben vor:
7.Effettuare le regolazioni di geometria descritte in precedenza
7.Efectúe los ajustes geométricos descritos más abajo.
8.Store /Memoriser **/Speichern** /Memorizzare /Almacene

GEOMETRY

9.Adjust position H.
9.Regler la position H
9.Korrigieren Sie Horizontale Lage.
9.Regolare la posizione H
9.Ajuste la posición H
10.Ajuster l'amplitude H
10.Adjust amplitude H.
10.Korrigieren Sie Horizontal-Amplitude
10 Regolare l'ampiezza H
10.Ajuste la amplitud H
11-12.Correction of EW pincushion distortion.
11-12.Correction de coussin EW
11-12.Korrektur der Ost/West Kissenverzerrung.
11-12.Correzione della distorsione a cuscino EW
11-12.Corrección de la distorsión de cojín EW.
13.Correction of corners (Shape).
13.Correction de coins (Shape)
13.Korrektur der Ecken.
13.Correzione degli angoli (Forma)
13.Corrección de esquinas (Shape)
14.Trapeze. / Trapèze
14 Trapez-Verzerrung.
14.Trapezio / Trapecio

"These adjustments are not necessary for 4:3 tubes in 16:9 mode"
"Pour les tubes 4/3 en mode 16/9, ces reglages ne sont pas necessaire"
"Diese Einstellungen sind nicht für 4:3 Bildröhren im 16:9 Betrieb erforderlich."
"Queste regolazioni non sono necessarie per tubi 4/3 in modo 16/9"
"Estos ajustes no son necesarios para los tubos 4/3 en modo 16/9"

V-Amplitude
V-Position
H-Position
S -Correction S
H-Amplitude
EW - Amplitude
EW - Trapezium
EW -Shape

Correct incorrect

➟ After setting ➟ Store (+) ☑

VIDEO **PAL**

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.
Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Normalise User Settings

Recalls the factory settings for colour, brightness, contrast and sharpness and sets contrast expand to "low".

☑ Factory settings recalled
☐ User settings kept.

R-Cut off* **G-Cut off*** ☼+◑+◑=nom. Grey scale test pattern white =100% grey

R - Drive **G - Drive** **B - Drive** ☼+◑+◑=nom. Grey scale test pattern white =100% white

Peak-White** ☼+◑+◑=nom. Peek white test pattern white =100%

CRT Pin 6,8,11

Blue cathode Blue cathode

Type Tube	[init]	
A51EFS	420	(600max)
A59EHJ	380	(540max)
A59EGD	400	(470max)
A66EHJ	300	(430max)
A68EGD	350	(410max)

Type Tube	[init]	
A80AEJ	240	(340max)
W56EGV	520	(610max)
W66EGV	480	(560max)
W76EGV	300	(350max)

Scal. Brightness ☼+◑ = 50% ◑ = 100% Grey scale test pattern white =100% black

Scal*. Colour ☼+◑+◑=nom. PAL (then SECAM +RGB) 75% Colour bar test pattern via RF.

Blue Cathode CRT F-H

Scal. Contrast factory settings.

IF

AGC
- Minimum noise- Minimum de bruit
- Minimum Rauschen- Rumore minimo
- Minimo ruido

FFi - Bit
Fast filter (IF /PLL)
Filtre rapide (FI /PLL)
Schnelles filter (ZF/PLL)
Filtro rapido (IF /PLL)

☑ Asie
☐ Europ

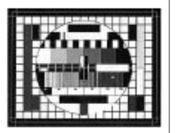
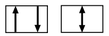
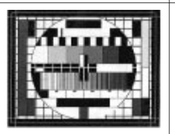
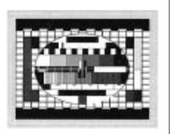
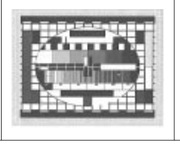
➟ After setting ➟ Store (+) ☑

Note :
* adjust separate for PAL/NTSC/SECAM and RGB/AV getrennte Einstellung für PAL/SEACAM und RGB/AV
* * After PEAK white adjustment control cut off setting. Repeat the adjustments if necessary. Nach der Einstellung von "Peak white" die "Cut off"-Einstellungen wiederholen.

GEOMETRY MODE ALIGNMENT

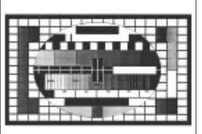
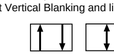
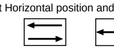
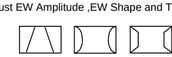
4/3 picture tube

Signal : 4/3 test pattern

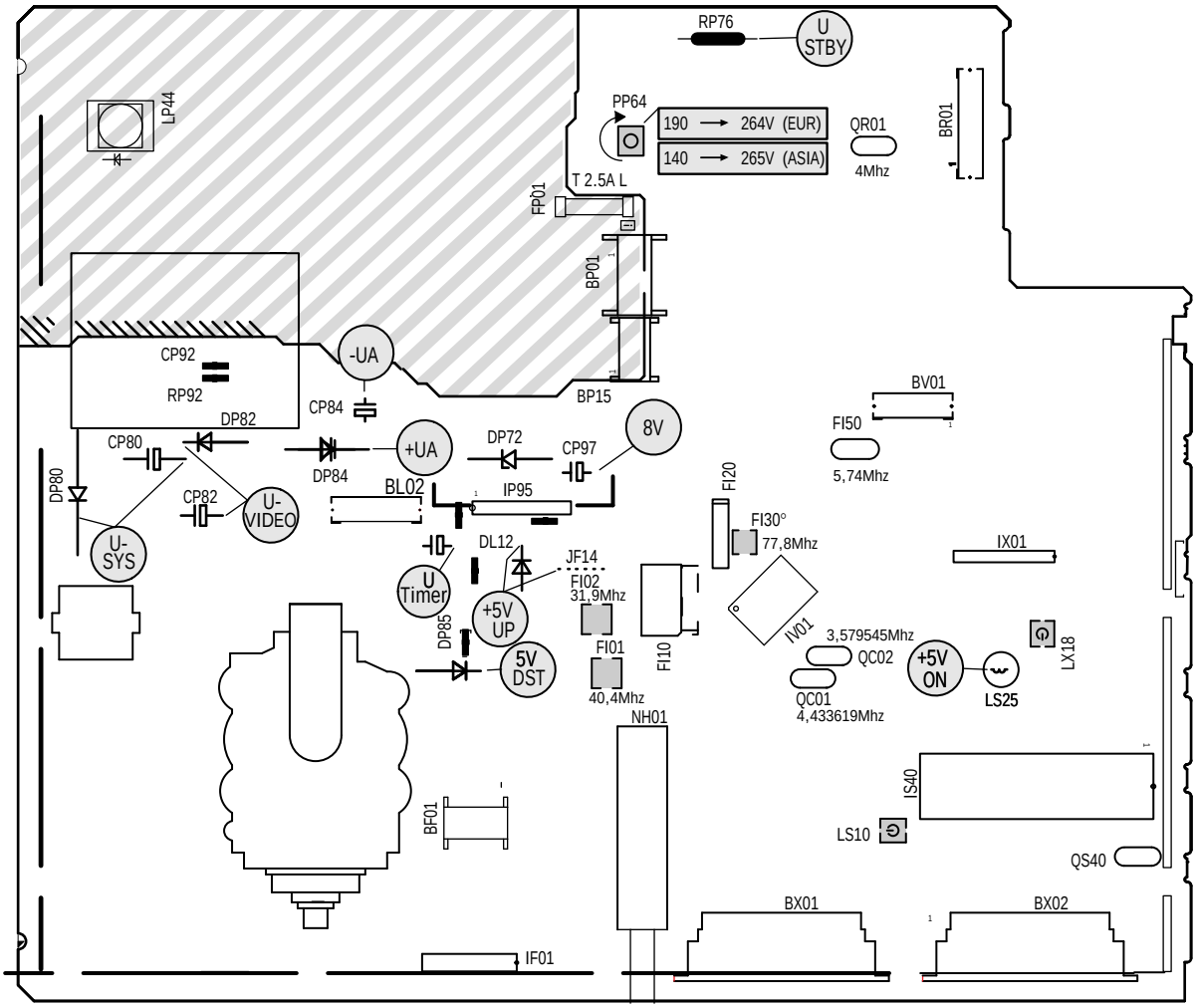
4 / 3 standard mode zoom 0		overscan V=107% , H=107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude 4-Adjust EW Amplitude ,EW Shape and Trapezium
<4/3> zoom 1		overscan V=120% , H=120%
16 / 9 standard mode zoom 0		Adjust the vertical height until V = 80%
<16 / 9> zoom 1		Adjust the vertical height : V =90%

16/9 picture tube

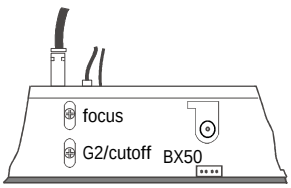
Signal : 4/3 test pattern

16 / 9 standard mode zoom 0		overscan V=107%, H =107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude  4-Adjust EW Amplitude ,EW Shape and Trapezium 

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGOLATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



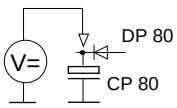
° it is not necessary , to adjust FI30 by after sales

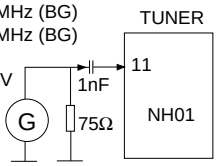


Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectada a la red.

⚠ Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un trasformatore per isolarvi dalla rete

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

<table>
<tr>
<td>U Sys</td>
<td>PP 64</td>
<td>+ + = 50%</td>
<td> 
</td>
<td>
<table>
<tr><th>Tube</th><th>Format</th><th>Usys</th><th>Jumper</th><th>RL65</th></tr>
<tr><td>A51EFS83X191</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A59EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A66EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A59EGD048X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68EGD038X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68AGA25X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A80AEJ15X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>W56EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W66EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W76EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
</table>
</td>
</tr>
<tr>
<td rowspan="2">IF Alignment
Alignement FI</td>
<td>trap 40,4Mhz
FI 01</td>
<td rowspan="2">Switch set to standard BG
Commuter le TV au standard BG

IF Signal
40,4MHz (BG)
31,9MHz (BG)
 
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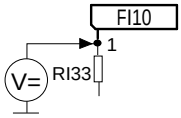
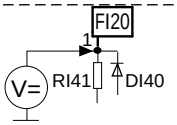
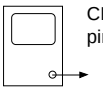
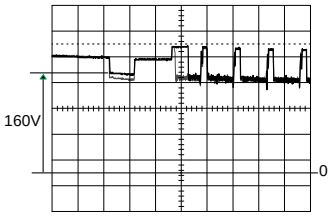
<td> 
</td>
<td>Adjust FI01 for minimum value at 40,4Mhz</td>
</tr>
<tr>
<td>trap 31,9Mhz
FI 02</td>
<td> 
</td>
<td>Adjust FI20 for minimum value at 31,9Mhz</td>
</tr>
<tr>
<td>U G2 / cutoff</td>
<td>SCREEN</td>
<td>+ + = 50%

AV (no Signal, black screen)</td>
<td> 
CRT IB01:
pins 9 / 12 / 15
highest output</td>
<td> 
</td>
</tr>
<tr>
<td>FOCUS</td>
<td>FOCUS
LL05</td>
<td> Test pattern
(standard values)</td>
<td> </td>
<td>Sharp picture</td>
</tr>
</table>

MODO SERVICIO (E)

I -ENTRADA/SALIDA MODO SERVICIO

1 ACCESO AL MODO SERVICIO

Acceso con panel control TV

- Con el mando a distancia conectar a STANDBY el televisor. Desconectar el aparato con el interruptor de la red (esperar hasta que el LED se apague).
- Pulse los botones **PR -** y **VOL -** y sin soltarlos,pulsar la tecla MARCHA:PARADA.
- Libere los botones **PR -** y **VOL -** (8S).

```
Soft-Ver.    V1.00-0    0080
Config.      A5- - - -N
Serial-No.   103465071

 QUIT
 TUBE
 SETUP
 GEOMETRY
 VIDEO
 IF
```

Nota :

En modo servicio:
- Se ignora la función de bloqueo y se inicializa la función "cerradura niños".
- Anula todos las horas programadas
- La patilla 8 del SCART es ignorada
- La detección WSS AV Link, EPG, y Telexto son desactivados.
- El apagado automático en caso de ausencia de señal de antena es desactivado.
- El contraste,color y brillo son puestos a los valores de fábrica.
- la nitidez es puesta al punto medio.
- La expansión de contrast al nivel bajo
- Modo Instalación es desactivado.
- Zoom y formato ignorados.

2 SALIDA TEMPORAL DEL MODO SERVICIO

- Pulse Salir en el mando a distancia
- Con el botón Menu puede acceder al menú de uso cotidiano.

- Puede entrar al Menú Servicio con el botón azul.

3 SALIDA DEL MODO SERVICIO

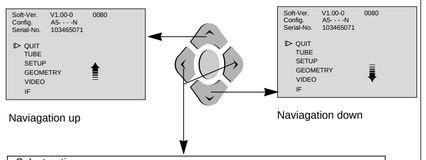
telecomando | **Panel de control TV** | **Tecla on/off de**

- Vaya al punto QUIT del menú principal de modo Servicio
- Función Stand-by o desconexión (off) con tecla on/off.
- Pulse el botón «<», «OK» o «>»
- Pulse el botón«VOL.+»
- Modo TV.

Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en la NVM

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE FUNCTIONS WALLIN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



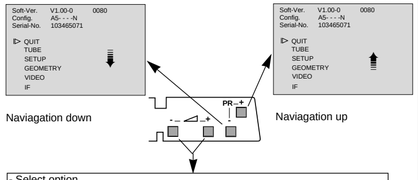
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

> → VALUE

< → VALUE

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE -



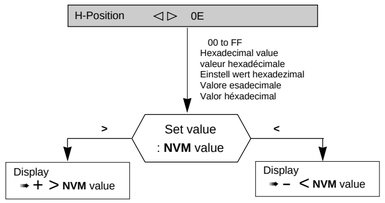
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE

Vol. - → VALUE

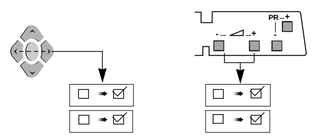
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELL WERTS VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALT FUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☑ the box.
Pour valider une fonction cocher ☑ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☑ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☑ la casella
Para poner en fucionamiento una función verifique (señale) ☑ la casilla

☑ : :Enable function ☐ : Disable function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☑
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati in RAM.
Durante el ajuste, los valores son almacenados temporalmente en RAM

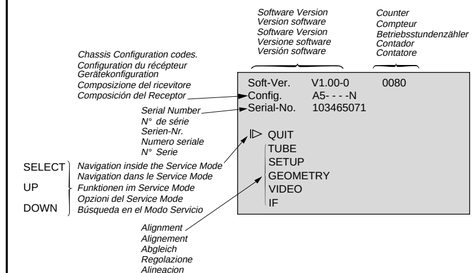
Store ➡ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Werts von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➡ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in den RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

ROM Default ➡ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden im RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL



TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÓN DEL TV

Config. A1Z-DKC

Character 1 : Tube type : «A»= 4/3 , «W» =16/9
Character 2 : Chassis type : «5» = 50Hz,
Character 3 : Zoom available : «Z»=yes, «-»=not
Character 4 : Ambiant Sensor : «S»= detected, «-»= not
Character 5 : Dolby : «D»=detected, «-»= not
Character 6 : AV Link detected : «K»=IR link detected, «-»= not
Character 7 : Chassis Variant: «N»= Nicam, «S»=Stereo

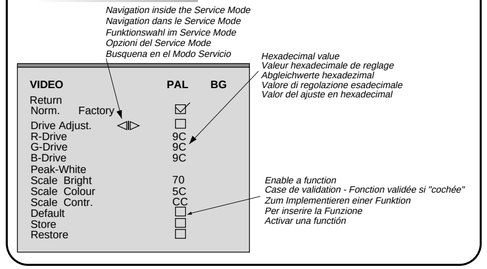
Serial-N0. AI6------

Character 1 : Factory : «A»= Angers , «C» =Celle, «T» =Tarancon
Character 2 : Year : «G» = 1996, «H»= 1997 etc..
Character 3 : Month, from : «1»=January to «C»=December
Character 4-9 : Serial N0.

TIME COUNTER - COMPTEUR DE TEMPS - BETRIEBSSTUNDENZÄHLER - CONTATORE - CONTADOR

The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contatore da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

TUBE
Return
Tube type A66ECY...
Store ◁▮▷ ☑
Restore ☐

SETUP
Return
Clear Progs. ▮▷
Kbd. Config. Default
WSS ☐
Default ☐
Store ☐
Restore ☐

GEOMETRY
Return
V- Slope 7C
V-Amplitude 6C
V-Position ◁▮▷ 7C
Blanking On ☐
S - Correction 54
H-Position 94
H-Amplitude 70
EW-Amplitude 78
EW-Trapezium 98
Default ☐
Store ☐
Restore ☐

VIDEO **PAL** **BG**
Return
Norm. Factory ☑
Drive Adjust. ◁▮▷ ☐
R-Drive 9C
G-Drive 9C
B-Drive 9C
Peak-White
Scale Bright 70
Scale Colour 5C
Scale Contr. CC
Default ☐
Store ☐
Restore ☐

IF
Return
AGC Take Over ◁▮▷ 88
FFI - Bit ☐
Default ☑
Store ☑
Restore ☑

Test Pattern Signal used: 4/3 with geometric circle. *Adjust separate for 4/3 and 16/9 format. See annexed* *The signals colour standard is auto detected and displayed opposite the main menu line.*

TUBE

Return
Closes the sub-menu and returns to the "Main Service Menu".Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs,das Hauptmenü des service Modes erscheint

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters). Once entered, the tubes geometry and video default vales are immediately activated. Variable geometry and video parameters are written to the NVM when the "STORE" line is selected.
See table below for tube type numbers.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramétres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach Tausch des NVM den bildröhrentyp (6 Ziffern) auswählen. Die neuen Geometrie-und Video-defaultwerte werden sofort aktiv. Variable Geometrie- und Videowerte werden durch Speichern mit "STORE" ins NVM geschrieben.
Bildrohrauflistung : siehe unten.

Scegliere il tubo appropriato dopo aver sostituito la NVM; i 6 caratteri che indicano il nuovo tipo di tubo, richiamano i valori video e geometria di default. I parametri per video e geometria vengono caricati nella NVM

Definir el tubo correcto después de haber cambiado el NVM.6 caracteres.Los nuevos valores de tipo de tubo (con la vídeo y la geometría por defecto) se activan inmediatamente. Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

➟ After setting ➟ Store (+) ☑

Tube Name	LIST name	Description
A51EFS83X191	A51EFS	4:3; 21" OT; AK-Mask; Coty-M
A59EHJ43X15	A59EHJ	4:3; 25" MP; AK-Mask; Vector
A66EHJ43X15	A66EHJ	4:3; 28" MP; AK-Mask; Vector
A68EGD038X30	A68EGD	4:3; 29" SF; Invar; Vector
A80AEJ13X01	A80AEJ	4:3; 33" MP AK-Mask; Coty-M
A59EGD048X30	A59EGD	4:3; 25" SF; Invar-Mask; Vector
A68AGA25X01	A68AGA	4:3; 29" VHP; AK-Mask; Coty-M
W66EGV023X015	W56EGV	16:9; 24" SF; Invar-Mask; Vector
W66EGV023X015	W66EGV	16:9; 28" SF; Invar-Mask; Vector
W76EGV023X015	W76EGV	16:9; 32" SF; Invar-Mask; Vector

SETUP

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Clear Prog.
Clears all programmes STORED in memory and RESETS all PICTURE and SOUND settings to the factory default values.
The AUTO INSTALL (out of factory) mode can be initialised by a long press (> 5sec.) of the selection button.

Efface tous les programmes mémorisés. valeurs SON et IMAGES: valeurs usines. Pour sortir des valeurs usine : Selection : Long press:2,5s

Löscht alle Programme und ersetzt alle Ton-und Bildeinstellungen durch Fabrikwerte. Nach erneutem Einschalten erscheint das Installationsmenü. Anwahl: 2,5s drücken

Clear Prog.
Cancella tutti i programmi in memoria.I Valori analogici SUONO E IMMAGINE vengono riportati a livello di default. Per ristabilire le condizioni di uscita fabbrica, selezionare la funzione e premere per 2,5sec

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores análogos de SOUND PICTURE: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

☑ active-aktiv ☐ No active-inaktiv

Kbd. Config
Factory adjusted
Reservé au reglage usine
Reserviert für fabrikeinstellungen
Riservato alla regolazione di fabbrica

Kbd. Config ◁▮▷ Default

WSS Automatic detection of DOLBY surround sound and 16/9 Format pictures via Teletext line number 23 is valid on all programmes.

Sélection du process WSS valid pour tous programmes

WSS (nur bei 16:9 oder Dolby) Auswertung der Zeile 23 zur automatischen Format umschaltung und Dolby umschaltung

Idendificazione "auto-surround" e "format" tramite il televideo, decodificando la riga 23. La selezione di WSS è valida per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑detect.enable- aktiv ☐ disable-inaktiv

GEOMETRY

Return
Closes the sub-menu and returns to the "Main Service Menu".

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

V-Blanking
Press </> on the RCU or VOL+/VOL- on TV front panel.
1.Select the standard 4:3 format and zoom mode 0.
1.Sélectionner le mode zoom standard 4/3 pour tube 4/3
1.Wählen Sie den Standard-Zoom 4:3 bei 4:3 Bildröhren.
1.Selezionare il modo zoom standard 4/3 per tubo 4/3
1.Seleccione el modo de zoom estándar 4/3 para tubo 4/3.
2.Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
2.appliquer une MIRE de BARRE avec seulement une ligne blanche horizontale en milieu de l'ecran
2.Speisen Sie ein Testbild mit nur einem horizontalen Strich in der Bildmitte ein.
2.Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
2.Aplique una plantilla de prueba con sólo una linea blanca horizontal en el centro de la pantalla.
3.Select **"Blanking On"** line of the menu and **ENABLE** (tick) the function, the bottom half of the screen will go black.
3.Positnner dans le mode Service Blanking On la moitié basse de l' ecran devient noire
3.Schalten Sie den Blanking-Mode ein. Die untere Hälfte des Bildschirms wird schwarz.
3.Posizionarsi in modo Service Blanking on; la parte inferiore dello schermo divienta nera
3.Pase al modo Service Blanking On. La mitad inferior de la pantalla se vuelve negra.
4.Select the **"V_Slope"** line of the menu and adjust its value until the centre line of the pattern is just invisible.
4.Aligner "Vertical - Slope" pour que la ligne mediane soit a peine non visible
4.Regeln Sie "V-Slope" so ein, daß die Mittellinie nahezu verschwindet.
4.Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
4.Alinee "Vertical-Slope" para que la linea mediana sea casi invisible.
5.Return to the "Blanking On" line of the menu and DISABLE (un-tick) the function. ☐
5 Revenir à Blanking On et mettre ☐
5.Schalten Sie den Blanking-Mode wieder ein und ☐
5.Ritornare in modo Blanking on e porre ☐
5.Vuelva a "Blanking on" y poner ☐
6.Switch the test pattern signal to the crosshatch geometry pattern.
6.Positioner la mire de quadrillage
6.Speisen Sie ein Gittertestbild ein.
6.Posizionare il monoscopio
6.Coloque la plantilla cuadriculada.
7.Perform the geometry adjustments described below.
7.Effectuer les reglages de geometrie d'écrits ci- dessous
7.Nehmen Sie die Geometrieeinstellung wie unten beschrieben vor:
7.Effettuare le regolazioni di geometria descritte in precedenza
7.Efectúe los ajustes geométricos descritos más abajo.
8.Store /Memoriser **/Speichern** /Memorizzare /Almacene

GEOMETRY

9.Adjust position H.
9.Regler la position H
9.Korrigieren Sie Horizontale Lage.
9.Regolare la posizione H
9.Ajuste la posición H
10.Ajuster l'amplitude H
10.Adjust amplitude H.
10.Korrigieren Sie Horizontal-Amplitude
10 Regolare l'ampiezza H
10.Ajuste la amplitud H
11-12.Correction of EW pincushion distortion.
11-12.Correction de coussin EW
11-12.Korrektur der Ost/West Kissenverzerrung.
11-12.Correzione della distorsione a cuscino EW
11-12.Corrección de la distorsión de cojín EW.
13.Correction of corners (Shape).
13.Correction de coins (Shape)
13.Korrektur der Ecken.
13.Correzione degli angoli (Forma)
13.Corrección de esquinas (Shape)
14.Trapeze. / Trapèze
14 Trapez-Verzerrung.
14.Trapezio / Trapecio

"These adjustments are not necessary for 4:3 tubes in 16:9 mode"
"Pour les tubes 4/3 en mode 16/9, ces reglages ne sont pas necessaire"
"Diese Einstellungen sind nicht für 4:3 Bildröhren im 16:9 Betrieb erforderlich."
"Queste regolazioni non sono necessarie per tubi 4/3 in modo 16/9"
"Estos ajustes no son necesarios para los tubos 4/3 en modo 16/9"

V-Amplitude
V-Position
H-Position
S -Correction S
H-Amplitude
EW - Amplitude
EW - Trapezium
EW -Shape

Correct incorrect

➟ After setting ➟ Store (+) ☑

VIDEO **PAL**

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.
Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Normalise User Settings

Recalls the factory settings for colour, brightness, contrast and sharpness and sets contrast expand to "low".

☑ Factory settings recalled
☐ User settings kept.

R-Cut off* **G-Cut off*** ☼+◑+◑=nom. Grey scale test pattern white =100% grey

R - Drive **G - Drive** **B - Drive** ☼+◑+◑=nom. Grey scale test pattern white =100% white

Peak-White** ☼+◑+◑=nom. Peek white test pattern white =100%

CRT Pin 6,8,11

Blue cathode Blue cathode

Type Tube	[init]	
A51EFS	420	(600max)
A59EHJ	380	(540max)
A59EGD	400	(470max)
A66EHJ	300	(430max)
A68EGD	350	(410max)

Type Tube	[init]	
A80AEJ	240	(340max)
W56EGV	520	(610max)
W66EGV	480	(560max)
W76EGV	300	(350max)

Scal. Brightness ☼+◑ = 50% ◑ = 100% Grey scale test pattern white =100% black

Scal*. Colour ☼+◑+◑=nom. PAL (then SECAM +RGB) 75% Colour bar test pattern via RF.

Blue Cathode CRT F-H

Scal. Contrast factory settings.

IF

AGC
- Minimum noise- Minimum de bruit
- Minimum Rauschen- Rumore minimo
- Minimo ruido

FFi - Bit
Fast filter (IF /PLL)
Filtre rapide (FI /PLL)
Schnelles filter (ZF/PLL)
Filtro rapido (IF /PLL)

☑ Asie
☐ Europ

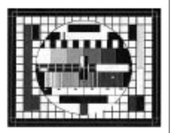
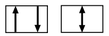
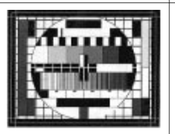
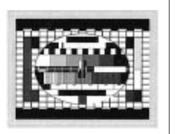
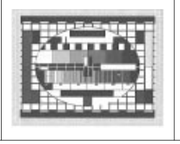
➟ After setting ➟ Store (+) ☑

Note :
* adjust separate for PAL/NTSC/SECAM and RGB/AV getrennte Einstellung für PAL/SEACAM und RGB/AV
* * After PEAK white adjustment control cut off setting. Repeat the adjustments if necessary. Nach der Einstellung von "Peak white" die "Cut off"-Einstellungen wiederholen.

GEOMETRY MODE ALIGNMENT

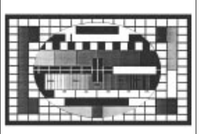
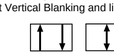
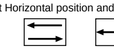
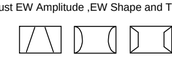
4/3 picture tube

Signal : 4/3 test pattern

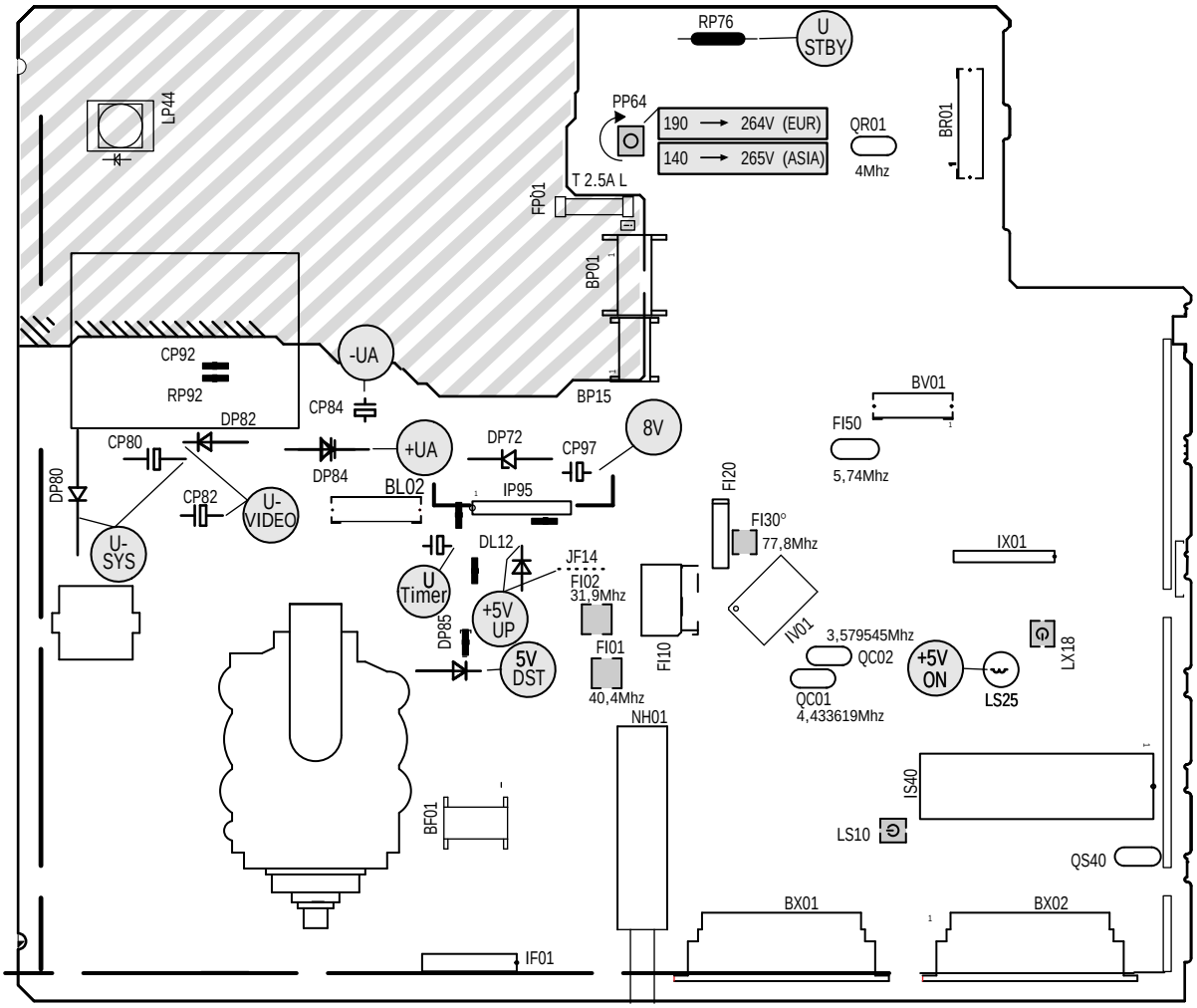
4 / 3 standard mode zoom 0		overscan V=107% , H=107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude 4-Adjust EW Amplitude ,EW Shape and Trapezium
<4/3> zoom 1		overscan V=120% , H=120%
16 / 9 standard mode zoom 0		Adjust the vertical height until V = 80%
<16 / 9> zoom 1		Adjust the vertical height : V =90%

16/9 picture tube

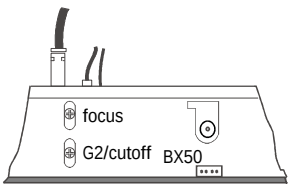
Signal : 4/3 test pattern

16 / 9 standard mode zoom 0		overscan V=107%, H =107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude  4-Adjust EW Amplitude ,EW Shape and Trapezium 

LOCATION OF CONTROLS - EMPLACEMENT DES REGLAGES - SERVICE LAGEPLAN - POSIZIONE REGOLATORI DI SERVIZIO - SITUACIÓN DE LOS AJUSTES



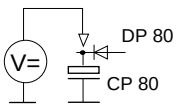
° it is not necessary , to adjust FI30 by after sales

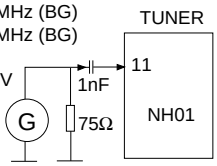


Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectada a la red.

⚠ Use isolating mains transformer -
Utiliser un transformateur isolateur du secteur -
Trenntrafo verwenden -
Utilizar un transformador aislador de red -
Utilizzare un trasformatore per isolarvi dalla rete

ADJUSTMENTS - REGLAGES - EINSTELLUNGEN - REGOLAZIONI - AJUSTES

<table>
<tr>
<td>U Sys</td>
<td>PP 64</td>
<td>+ + = 50%</td>
<td> 
</td>
<td>
<table>
<tr><th>Tube</th><th>Format</th><th>Usys</th><th>Jumper</th><th>RL65</th></tr>
<tr><td>A51EFS83X191</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A59EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A66EHJ43X15</td><td>4:3</td><td>132V+/-0,5V</td><td>JL81</td><td>24k</td></tr>
<tr><td>A59EGD048X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68EGD038X30</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A68AGA25X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>A80AEJ15X01</td><td>4:3</td><td>126V+/-0,5V</td><td>JL80</td><td>4k7</td></tr>
<tr><td>W56EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W66EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
<tr><td>W76EGV023X015</td><td>16:9</td><td>138V+/-0,5V</td><td>JL82</td><td>47k</td></tr>
</table>
</td>
</tr>
<tr>
<td rowspan="2">IF Alignment
Alignement FI</td>
<td>trap 40,4Mhz
FI 01</td>
<td rowspan="2">Switch set to standard BG
Commuter le TV au standard BG

IF Signal
40,4MHz (BG)
31,9MHz (BG)
 
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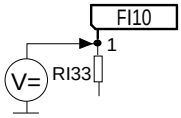
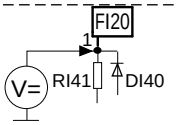
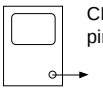
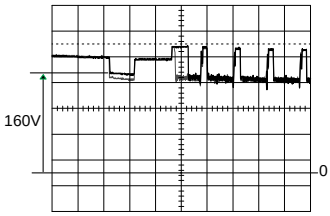
<td> 
</td>
<td>Adjust FI01 for minimum value at 40,4Mhz</td>
</tr>
<tr>
<td>trap 31,9Mhz
FI 02</td>
<td> 
</td>
<td>Adjust FI20 for minimum value at 31,9Mhz</td>
</tr>
<tr>
<td>U G2 / cutoff</td>
<td>SCREEN</td>
<td>+ + = 50%

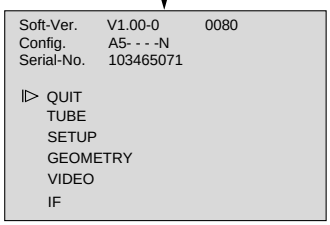
AV (no Signal, black screen)</td>
<td> 
CRT IB01:
pins 9 / 12 / 15
highest output</td>
<td> 
</td>
</tr>
<tr>
<td>FOCUS</td>
<td>FOCUS
LL05</td>
<td> Test pattern
(standard values)</td>
<td> </td>
<td>Sharp picture</td>
</tr>
</table>

I - EIN-AUSTIEG SERVICE MODE - ACCESSO/USCITA ALLA/DALLA FUNZIONE

1 EINSTIEG IN DEN SERVICE MODE

Zugriff über die Tastatur des Fernsehgeräts

- Mit der Fernbedienung das Fernsehgerät in Stand-by schalten. Das Gerät mit dem Netzschalter ausschalten (warten bis LED dunkel ist)
- Gleichzeitig die Tasten **PR-** und **VOL-** drücken und den TV über die EIN/AUS-Taste einschalten.
- Die Tasten **PR-** und **VOL-** (8s) gedrückt halten.



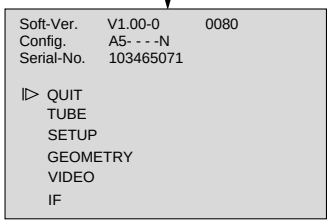
Anmerkung :

Im SERVICE MODE :
- *wird die Sperrfunktion (PIN-Nummer) ignoriert und die Kindersicherung gelöscht (reinitialisiert).*
- *werden alle Ein- und Ausschaltzeitgeber gelöscht.*
- *wird die SCART - Schaltspannung ignoriert.*
- *werden AV- Link WSS, EPG und Teletext gesperrt*
- *wird die automatische Abschaltung bei fehlendem Antennensignal gesperrt.*
- *werden Kontrast, Farbe und Helligkeit auf Standardwerte gesetzt.*
- *wird die ßildschärfe auf Mittelstellung (nominal) gesetzt.*
- *wird der Kontrast-Expander auf "gering.." gesetzt.*
- *wird das Standardformat bzw. der Standard-Zoom modus gewählt.*

1 ACCESSO AL SERVICE MODE

tramite i comandi del televisore

- Commutare il televisore in stand-by con il telecomando. Spegnere l'apparecchio con l'interruttore di rete (attendere finchè il LED è spento)
- Tenere premuti i tasti **PR- e VOL-** accendendo il TV con il pulsante ON/OFF.
- Premere i pulsanti **PR - e VOL-** (8s).



Nota :

Nel service mode:
- *la funzione Blocco (Numero Pin) viene ignorata e la funzione Blocco Bambini è reinizializzata.*
- *Cancella la programmazione sveglia*
- *Il piedino 8 della scart deve essere ignorato.*
- *I riconoscimenti AV-Link WSS, EPG e televideo non sono abilitati.*
- *Nel caso di mancanza di segnale d'antenna, la funzione automatica di standby é disabilitata.*
- *Contrasto, colore, luminosità : regolazioni di fabbrica.*
- *Nitidezza: media (nominale)*
- *L'espansore contrasto é a livello basso.*
- *Zoom e formato a livello.*

2 VORÜBERGEHENDES VERLASSEN DES SERVICE MODE

- Auf der Fernbedienung EXIT drücken.
- Mit der Taste Menü gelangen Sie zum Menü Übersicht

- Mit der blauen Taste gelangen sie zum Service-Menü.

2 USCITA TEMPORANEA DAL SERVICE MODE

- Premere Exit sul telecomando.
- Al menu di uso quotidiano si accede attraverso il pulsante Menu.

- É possibile rientrare nel Menu Field Service attraverso il pulsante Blu.

3 ENDGÜLTIGES VERLASSEN DES SERVICE MODE

Fernbedienung | **TV-Bedienfeld** | **EIN /Aus - Taste**

- Wenn der Zeiger im Hauptmenü des Service-Modus auf BEENDEN steht
- Mit Standby-Funktion oder **EIN/AUS** - taste ausschalten
- Taste «<», «OK» oder «>»drücken
- Taste «VOL+» drücken
- TV Modus

Werte und Einstellungen, die nicht vor dem Verlassen des Service-Modus gespeichert wurden, werden nicht in den Permanentspeicher übernommen

3 USCIRE DAL SERVICE MODE

telecomando | **Pannello controllo TV** | **Tasto on/off o standby**

- Andare al punto QUIT nel Modo Field service del Menu principale
- Funzione Stand-by o «off» con il tasto on/off
- Premere «<»,«OK» o «>»
- Premere «VOL.+»
- Modo TV.

I Valori e regolazioni non memorizzate prima di uscire dal Service Mode. Non vengono scritti nella NVM

MODO SERVICIO (E)

I -ENTRADA/SALIDA MODO SERVICIO

1 ACCESO AL MODO SERVICIO

Acceso con panel control TV

- Con el mando a distancia conectar a STANDBY el televisor. Desconectar el aparato con el interruptor de la red (esperar hasta que el LED se apague).
- Pulse los botones **PR -** y **VOL -** y sin soltarlos,pulsar la tecla MARCHA:PARADA.
- Libere los botones **PR -** y **VOL -** (8S).

```
Soft-Ver.    V1.00-0    0080
Config.      A5- - - -N
Serial-No.   103465071

 QUIT
 TUBE
 SETUP
 GEOMETRY
 VIDEO
 IF
```

Nota :

En modo servicio:
- Se ignora la función de bloqueo y se inicializa la función "cerradura niños".
- Anula todos las horas programadas
- La patilla 8 del SCART es ignorada
- La detección WSS AV Link, EPG, y Telexto son desactivados.
- El apagado automático en caso de ausencia de señal de antena es desactivado.
- El contraste,color y brillo son puestos a los valores de fábrica.
- la nitidez es puesta al punto medio.
- La expansión de contrast al nivel bajo
- Modo Instalación es desactivado.
- Zoom y formato ignorados.

2 SALIDA TEMPORAL DEL MODO SERVICIO

- Pulse Salir en el mando a distancia
- Con el botón Menu puede acceder al menú de uso cotidiano.

- Puede entrar al Menú Servicio con el botón azul.

3 SALIDA DEL MODO SERVICIO

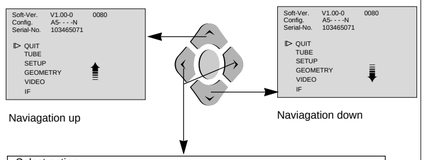
telecomando | **Panel de control TV** | **Tecla on/off de**

- Vaya al punto QUIT del menú principal de modo Servicio
- Función Stand-by o desconexión (off) con tecla on/off.
- Pulse el botón «<», «OK» o «>»
- Pulse el botón«VOL.+»
- Modo TV.

Los valores o ajustes no se guardan antes de salir del modo servicio y no se escriben en la NVM

II - NAVIGATION INSIDE THE SERVICE MODE - DEPLACEMENT DANS LE MODE SERVICE FUNCTIONS WALLIN SERVICE MODE - OPZIONI NEL SERVICE MODE - BUSQUEDA EN MODO SERVICIO

1 REMOTE CONTROL - TELECOMMANDE - FERNBEDIENUNG TELECOMANDO - MANDO A DISTANCIA



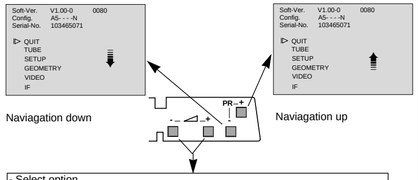
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

> → VALUE

< → VALUE

2 TV CONTROL PANEL - CLAVIER TV - TASTATUR DES FERNSEHGERÄTS - COMANDI DEL TELEVISORE -



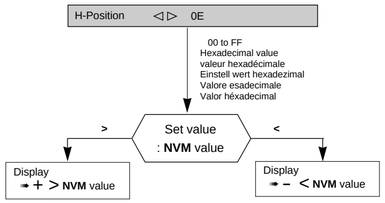
- Select option
- Option anwählen
- Selezionare l'opzione
- Seleccionar opción

- "Change" value
- Wert "ändern"
- "Cambiare" valore
- "Cambiar" valor

Vol. + → VALUE

Vol. - → VALUE

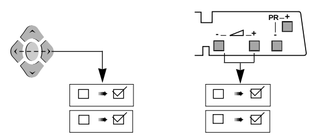
3 DISPLAYING THE VALUE OF THE SETTING - AFFICHAGE DES VALEURS - ANZEIGE DES EINSTELL WERTS VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - VISUALIZACION DEL VALOR DE AJUSTE



4 TOGGLE FUNCTIONS - VALIDATION DES FONCTIONS EIN-UND AUSSCHALT FUNKTIONEN - FUNZIONI DI COMMUTAZIONE - FUNCION CONMUTACION

To enable a function check (tick) ☑ the box.
Pour valider une fonction cocher ☑ la case correspondante
Zum Implementieren einer Funktion das Kontrollkästchen ☑ aktivieren (ankreuzen)
Per implementare una funzione di verifica, (vistare) ☑ la casella
Para poner en fucionamiento una función verifique (señale) ☑ la casilla

☑ : :Enable function ☐ : Disable function



5 STORING VALUES IN MEMORY - MEMORISATION DES VALEURS - SPEICHERN DER WERTE - MEMORIZZAEZ I VALORI - VALORES ALMACENADOS EN LA MEMORIA

After setting, the values are stored in NVM.
Après réglages les valeurs sont mémorisées en NVM.
Nach dem Einstellen werden die Werte im NVM gespeichert.
Dopo la regolazione i valori vengono memorizzati in NVM.
Después del ajuste, los valores son almacenados en NVM

The box ☐ becomes ☑
During alignment, values are temporarily stored in RAM.
En cours d'alignement les valeurs sont mémorisées temporairement en RAM
Während des Abgleichs werden die Werte vorübergehend im RAM gespeichert
Durante l'allineamento i valori vengono memorizzati in RAM.
Durante el ajuste, los valores son almacenados temporalmente en RAM

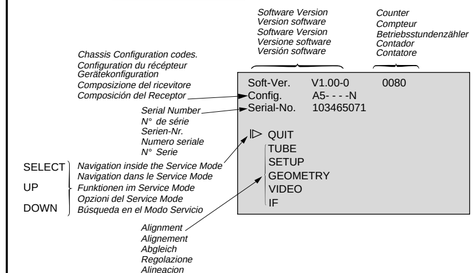
Store ➡ Copîes RAM values into NVM
Copie la valeur RAM en NVM
Kopieren des Werts von RAM nach NVM
Copiare i valori RAM in NVM
Copiar valores RAM en NVM

Restore ➡ Copies all values from NVM into RAM.
Copie toutes les valeurs des données NVM en RAM
Kopiert alle NVM-Datenwerte in den RAM
Copiare tutti i valori da NVM sulla RAM
Copia todos los valores de NVM a RAM

ROM Default ➡ All the default values of a page in use are stored in RAM.
L'ensemble des valeurs par défaut d'une page courante est chargé en RAM.
Sämtliche Standardwerte der aktuellen Seite werden im RAM geladen
Tutti i valori di default di una pagina in uso vengono memorizzati sulla RAM
Todos los valores por defecto de la página en curso están almacenados en RAM.

III - LITE-MENU FOR FIELD SERVICE MODE - MENUS DU MODE SERVICE

1 MAIN MENU - MENU PRINCIPAL



TV CONFIGURATION - CONFIGURATION DU TV - GERÄTEKONFIGURATION - CONFIGURAZIONE DEL TV - CONFIGURACIÓN DEL TV

Config. A1Z-DKC

Character 1 : Tube type : «A»= 4/3 , «W» =16/9
Character 2 : Chassis type : «5» = 50Hz,
Character 3 : Zoom available : «Z»=yes, «-»=not
Character 4 : Ambiant Sensor : «S»= detected, «-»= not
Character 5 : Dolby : «D»=detected, «-»= not
Character 6 : AV Link detected : «K»=IR link detected, «-»= not
Character 7 : Chassis Variant: «N»= Nicam, «S»=Stereo

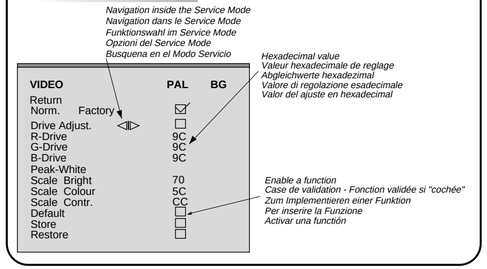
Serial-N0. AI6------

Character 1 : Factory : «A»= Angers , «C» =Celle, «T» =Tarancon
Character 2 : Year : «G» = 1996, «H»= 1997 etc..
Character 3 : Month, from : «1»=January to «C»=December
Character 4-9 : Serial N0.

TIME COUNTER - COMPTEUR DE TEMPS - BETRIEBSSTUNDENZÄHLER - CONTATORE - CONTADOR

The counter indicates the TV's number of service hours.It counts from to 0 to 65535 hours. The display is hexadecimal.
Le compteur de temps indique le nombre d'heures de service du TV. Il compte de 0 à 65535 heures. L'affichage est en hexadécimal.
Der Zähler zeigt an, wieviele Stunden der Fernseher in Betrieb ist. Die Anzeige ist hexadezimal.
Il contatore indica il numero di ore di servizio del TV. Puo' contatore da 0 a 65535. La visualizzazione è esadecimale.
El contador indica el número de horas de servicio de la TV. Cuenta de 0 a 65535 horas. El visualizador es hexadecimal.

2 SUBMENU - SOUS-MENU



ALIGNMENT PROCEDURE - PROCESSUS DE REGLAGES - ABGLEICH - VISUALIZZAZIONE DEL VALORE DELLA REGOLAZIONE - PROCEDIMIENTO DE ALINEACION

TUBE
Return
Tube type A66ECY...
Store ◁▮▷ ☑
Restore ☐

SETUP
Return
Clear Progs. ▮▷
Kbd. Config. Default
WSS ☐
Default ☐
Store ☐
Restore ☐

GEOMETRY
Return
V- Slope 7C
V-Amplitude 6C
V-Position ◁▮▷ 7C
Blanking On ☐
S - Correction 54
H-Position 94
H-Amplitude 70
EW-Amplitude 78
EW-Trapezium 98
Default ☐
Store ☐
Restore ☐

VIDEO **PAL** **BG**
Return
Norm. Factory ☑
Drive Adjust. ◁▮▷ ☐
R-Drive 9C
G-Drive 9C
B-Drive 9C
Peak-White
Scale Bright 70
Scale Colour 5C
Scale Contr. CC
Default ☐
Store ☐
Restore ☐

IF
Return
AGC Take Over ◁▮▷ 88
FFI - Bit ☐
Default ☑
Store ☑
Restore ☑

Test Pattern Signal used: 4/3 with geometric circle. *Adjust separate for 4/3 and 16/9 format. See annexed* *The signals colour standard is auto detected and displayed opposite the main menu line.*

TUBE

Return
Closes the sub-menu and returns to the "Main Service Menu".Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs,das Hauptmenü des service Modes erscheint

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Tube type

After replacing the NVM, the correct tube type number must be entered (6 characters). Once entered, the tubes geometry and video default vales are immediately activated. Variable geometry and video parameters are written to the NVM when the "STORE" line is selected.
See table below for tube type numbers.

Definit le tube exact après changement de NVM.
Les nouvelles valeurs de tubes (avec video et géometrie) sont actives de suite.
Les paramétres de vidéo et de géométrie sont chargés en NVM lorsque STORE est sélectionné. Voir liste ci-dessous.

Nach Tausch des NVM den bildröhrentyp (6 Ziffern) auswählen. Die neuen Geometrie-und Video-defaultwerte werden sofort aktiv. Variable Geometrie- und Videowerte werden durch Speichern mit "STORE" ins NVM geschrieben.
Bildrohrauflistung : siehe unten.

Scegliere il tubo appropriato dopo aver sostituito la NVM; i 6 caratteri che indicano il nuovo tipo di tubo, richiamano i valori video e geometria di default. I parametri per video e geometria vengono caricati nella NVM

Definir el tubo correcto después de haber cambiado el NVM.6 caracteres.Los nuevos valores de tipo de tubo (con la vídeo y la geometría por defecto) se activan inmediatamente. Los parámetros variables de geometría y vídeo se graban en el NVM al seleccionar la función Store. Vea más abajo la lista de tubos.

➟ After setting ➟ Store (+) ☑

Tube Name	LIST name	Description
A51EFS83X191	A51EFS	4:3; 21" OT; AK-Mask; Coty-M
A59EHJ43X15	A59EHJ	4:3; 25" MP; AK-Mask; Vector
A66EHJ43X15	A66EHJ	4:3; 28" MP; AK-Mask; Vector
A68EGD038X30	A68EGD	4:3; 29" SF; Invar; Vector
A80AEJ13X01	A80AEJ	4:3; 33" MP AK-Mask; Coty-M
A59EGD048X30	A59EGD	4:3; 25" SF; Invar-Mask; Vector
A68AGA25X01	A68AGA	4:3; 29" VHP; AK-Mask; Coty-M
W66EGV023X015	W56EGV	16:9; 24" SF; Invar-Mask; Vector
W66EGV023X015	W66EGV	16:9; 28" SF; Invar-Mask; Vector
W76EGV023X015	W76EGV	16:9; 32" SF; Invar-Mask; Vector

SETUP

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Clear Prog.
Clears all programmes STORED in memory and RESETS all PICTURE and SOUND settings to the factory default values.
The AUTO INSTALL (out of factory) mode can be initialised by a long press (> 5sec.) of the selection button.

Efface tous les programmes mémorisés. valeurs SON et IMAGES: valeurs usines. Pour sortir des valeurs usine : Selection : Long press:2,5s

Löscht alle Programme und ersetzt alle Ton-und Bildeinstellungen durch Fabrikwerte. Nach erneutem Einschalten erscheint das Installationsmenü. Anwahl: 2,5s drücken

Clear Prog.
Cancella tutti i programmi in memoria.I Valori analogici SUONO E IMMAGINE vengono riportati a livello di default. Per ristabilire le condizioni di uscita fabbrica, selezionare la funzione e premere per 2,5sec

Programa de borrado.
Borra todos los programas almacenados en la memoria.Valores análogos de SOUND PICTURE: valores de fábrica.Regreso a la TV para "salir del modo fábrica".Selección: Presión larga igual a 2,5 s.

☑ active-aktiv ☐ No active-inaktiv

Kbd. Config
Factory adjusted
Reservé au reglage usine
Reserviert für fabrikeinstellungen
Riservato alla regolazione di fabbrica

Kbd. Config ◁▮▷ Default

WSS Automatic detection of DOLBY surround sound and 16/9 Format pictures via Teletext line number 23 is valid on all programmes.

Sélection du process WSS valid pour tous programmes

WSS (nur bei 16:9 oder Dolby) Auswertung der Zeile 23 zur automatischen Format umschaltung und Dolby umschaltung

Idendificazione "auto-surround" e "format" tramite il televideo, decodificando la riga 23. La selezione di WSS è valida per tutti i programmi.

Detección "auto-surround" y "format" a través de la línea 23 de Teletext.La selección del procesamiento WSS es válida para todos los programas.

☑detect.enable- aktiv ☐ disable-inaktiv

GEOMETRY

Return
Closes the sub-menu and returns to the "Main Service Menu".

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

V-Blanking
Press </> on the RCU or VOL+/VOL- on TV front panel.
1.Select the standard 4:3 format and zoom mode 0.
1.Sélectionner le mode zoom standard 4/3 pour tube 4/3
1.Wählen Sie den Standard-Zoom 4:3 bei 4:3 Bildröhren.
1.Selezionare il modo zoom standard 4/3 per tubo 4/3
1.Seleccione el modo de zoom estándar 4/3 para tubo 4/3.
2.Apply a test pattern signal to the TV with a single horizontal and vertical line on the screen.
2.appliquer une MIRE de BARRE avec seulement une ligne blanche horizontale en milieu de l'ecran
2.Speisen Sie ein Testbild mit nur einem horizontalen Strich in der Bildmitte ein.
2.Applicare un monoscopio con un'unica linea bianca orizzontale al centro dello schermo
2.Aplique una plantilla de prueba con sólo una linea blanca horizontal en el centro de la pantalla.
3.Select **"Blanking On"** line of the menu and **ENABLE** (tick) the function, the bottom half of the screen will go black.
3.Positnner dans le mode Service Blanking On la moitié basse de l' ecran devient noire
3.Schalten Sie den Blanking-Mode ein. Die untere Hälfte des Bildschirms wird schwarz.
3.Posizionarsi in modo Service Blanking on; la parte inferiore dello schermo divienta nera
3.Pase al modo Service Blanking On. La mitad inferior de la pantalla se vuelve negra.
4.Select the **"V_Slope"** line of the menu and adjust its value until the centre line of the pattern is just invisible.
4.Aligner "Vertical - Slope" pour que la ligne mediane soit a peine non visible
4.Regeln Sie "V-Slope" so ein, daß die Mittellinie nahezu verschwindet.
4.Allineare la "Vertical Slope" in modo che la linea centrale sia appena visibile
4.Alinee "Vertical-Slope" para que la linea mediana sea casi invisible.
5.Return to the "Blanking On" line of the menu and DISABLE (un-tick) the function. ☐
5 Revenir à Blanking On et mettre ☐
5.Schalten Sie den Blanking-Mode wieder ein und ☐
5.Ritornare in modo Blanking on e porre ☐
5.Vuelva a "Blanking on" y poner ☐
6.Switch the test pattern signal to the crosshatch geometry pattern.
6.Positioner la mire de quadrillage
6.Speisen Sie ein Gittertestbild ein.
6.Posizionare il monoscopio
6.Coloque la plantilla cuadriculada.
7.Perform the geometry adjustments described below.
7.Effectuer les reglages de geometrie d'écrits ci- dessous
7.Nehmen Sie die Geometrieeinstellung wie unten beschrieben vor:
7.Effettuare le regolazioni di geometria descritte in precedenza
7.Efectúe los ajustes geométricos descritos más abajo.
8.Store /Memoriser **/Speichern** /Memorizzare /Almacene

GEOMETRY

9.Adjust position H.
9.Regler la position H
9.Korrigieren Sie Horizontale Lage.
9.Regolare la posizione H
9.Ajuste la posición H
10.Ajuster l'amplitude H
10.Adjust amplitude H.
10.Korrigieren Sie Horizontal-Amplitude
10 Regolare l'ampiezza H
10.Ajuste la amplitud H
11-12.Correction of EW pincushion distortion.
11-12.Correction de coussin EW
11-12.Korrektur der Ost/West Kissenverzerrung.
11-12.Correzione della distorsione a cuscino EW
11-12.Corrección de la distorsión de cojín EW.
13.Correction of corners (Shape).
13.Correction de coins (Shape)
13.Korrektur der Ecken.
13.Correzione degli angoli (Forma)
13.Corrección de esquinas (Shape)
14.Trapeze. / Trapèze
14 Trapez-Verzerrung.
14.Trapezio / Trapecio

"These adjustments are not necessary for 4:3 tubes in 16:9 mode"
"Pour les tubes 4/3 en mode 16/9, ces reglages ne sont pas necessaire"
"Diese Einstellungen sind nicht für 4:3 Bildröhren im 16:9 Betrieb erforderlich."
"Queste regolazioni non sono necessarie per tubi 4/3 in modo 16/9"
"Estos ajustes no son necesarios para los tubos 4/3 en modo 16/9"

V-Amplitude
V-Position
H-Position
S -Correction S
H-Amplitude
EW - Amplitude
EW - Trapezium
EW -Shape

Correct incorrect

➟ After setting ➟ Store (+) ☑

VIDEO **PAL**

Return
Closes the sub-menu and returns to the **"Main Service Menu"**.
Press </> on the RCU or VOL+/VOL- on TV front panel.

Retourne au menu principal.

Verlassen des Untermenüs

Chiude il sottomenu e fa apparire il menu principale Field Service Mode.

Cierra el submenú. El menú Field Service Mode aparece.

Press </>: remote control; Vol. +/- : TV keyb.

Normalise User Settings

Recalls the factory settings for colour, brightness, contrast and sharpness and sets contrast expand to "low".

☑ Factory settings recalled
☐ User settings kept.

R-Cut off* **G-Cut off*** ☼+◑+◑=nom. Grey scale test pattern white =100% grey

R - Drive **G - Drive** **B - Drive** ☼+◑+◑=nom. Grey scale test pattern white =100% white

Peak-White** ☼+◑+◑=nom. Peek white test pattern white =100%

CRT Pin 6,8,11

Blue cathode Blue cathode

Type Tube	[init]	
A51EFS	420	(600max)
A59EHJ	380	(540max)
A59EGD	400	(470max)
A66EHJ	300	(430max)
A68EGD	350	(410max)

Type Tube	[init]	
A80AEJ	240	(340max)
W56EGV	520	(610max)
W66EGV	480	(560max)
W76EGV	300	(350max)

Scal. Brightness ☼+◑ = 50% ◑ = 100% Grey scale test pattern white =100% black

Scal*. Colour ☼+◑+◑=nom. PAL (then SECAM +RGB) 75% Colour bar test pattern via RF.

Blue Cathode CRT F-H

Scal. Contrast factory settings.

IF

AGC
- Minimum noise- Minimum de bruit
- Minimum Rauschen- Rumore minimo
- Minimo ruido

FFi - Bit
Fast filter (IF /PLL)
Filtre rapide (FI /PLL)
Schnelles filter (ZF/PLL)
Filtro rapido (IF /PLL)

☑ Asie
☐ Europ

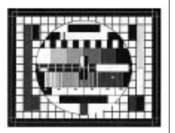
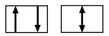
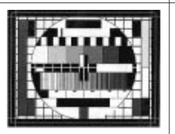
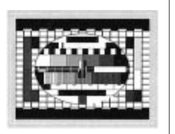
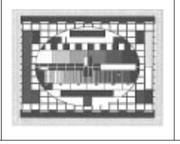
➟ After setting ➟ Store (+) ☑

Note :
* adjust separate for PAL/NTSC/SECAM and RGB/AV getrennte Einstellung für PAL/SEACAM und RGB/AV
* * After PEAK white adjustment control cut off setting. Repeat the adjustments if necessary. Nach der Einstellung von "Peak white" die "Cut off"-Einstellungen wiederholen.

GEOMETRY MODE ALIGNMENT

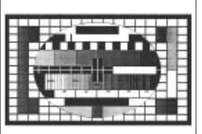
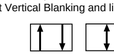
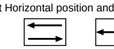
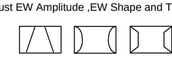
4/3 picture tube

Signal : 4/3 test pattern

4 / 3 standard mode zoom 0		overscan V=107% , H=107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude 4-Adjust EW Amplitude ,EW Shape and Trapezium
<4/3> zoom 1		overscan V=120% , H=120%
16 / 9 standard mode zoom 0		Adjust the vertical height until V = 80%
<16 / 9> zoom 1		Adjust the vertical height : V =90%

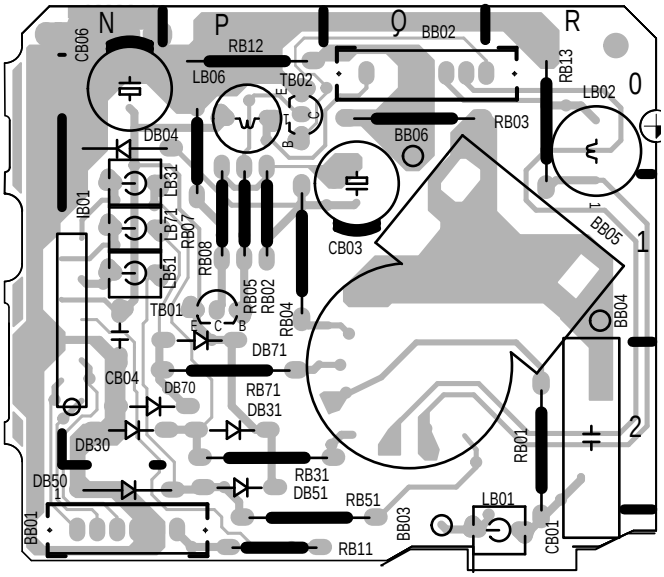
16/9 picture tube

Signal : 4/3 test pattern

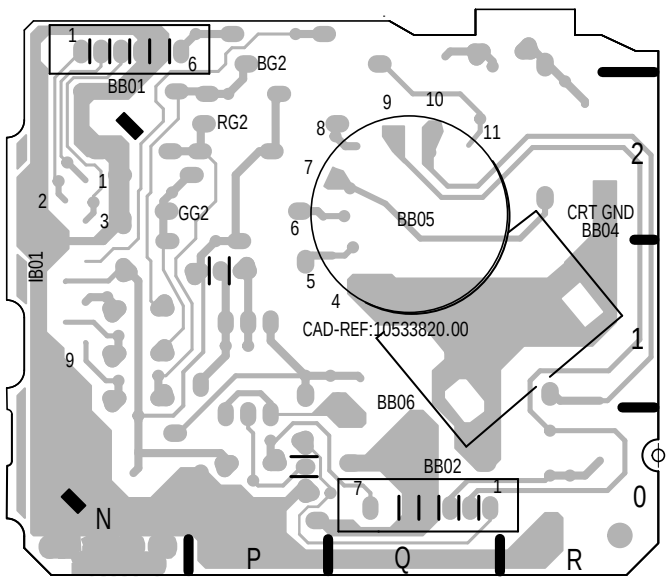
16 / 9 standard mode zoom 0		overscan V=107%, H =107% 1- Adjust Vertical position and Vertical amplitude 2- Adjust Vertical Blanking and linearity  3- Adjust Horizontal position and Horizontal ampltude  4-Adjust EW Amplitude ,EW Shape and Trapezium 

VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO

COMPONENT SIDE - CÖTE COMPOSANTS - BESTÜCKUNGSSEITE -
LATO COMPONENTI - LADO COMPONENTES



SOLDER SIDE - CÔTE SOUDURES - LÖTSEITE - LATO SALDATURE - LADO SOLDADURAS



POWER SUPPLY - ALIMENTATION - NETZTEIL - ALIMENTAZIONE - ALIMENTACIÓN

(5) : standby

Note :
During measurements in the power supply unit
- Use the primary power unit ground (PGND).

Attention :
Mesure dans le bloc alimentation
- Utiliser la masse du bloc alimentation (PGND).

Achtung :
Bei Messungen im Primärnetzteil
- Primärnetzteilmasse verwenden (PGND).

Attenzione :
misure nell'alimentatore primario
- usare massa alimentazione primario (PGND).

Cuidado :
Medida en el bloque de alimentacion
- Utilizar la masa del bloque de alimentacion (PGND).

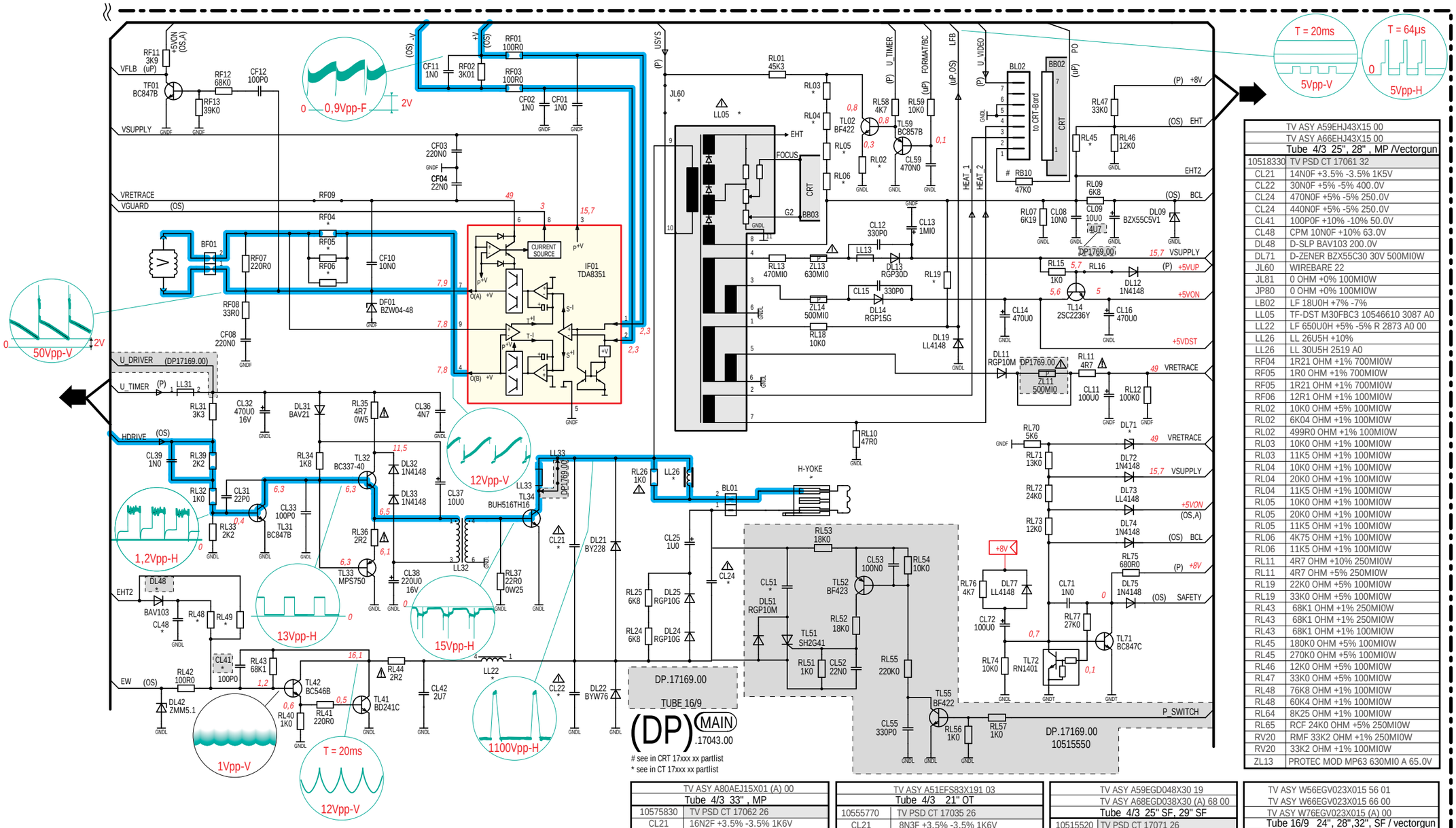
Part of board connected to mains supply.
Partie du châssis reliée au secteur.
Primärseite des Netzteils.
Parte dello châssis collegata alla rete.
Parte del chassis conectar a la red.

MAIN (PP)17900

Tube	Format	Usys	Jumper	RL65
A51EFS83X191	4:3	126V	JL80	4k7
A59EHJ43X15	4:3	132V	JL81	24k
A66EHJ43X15	4:3	132V	JL81	24k
A59EGD048X30	4:3	126V	JL80	4k7
A68EGD038X30	4:3	126V	JL80	4k7
A68AGA25X01	4:3	126V	JL80	4k7
A80AEJ15X01	4:3	126V	JL80	4k7
W56EGV023X015	16:9	138V	JL82	47k
W66EGV023X015	16:9	138V	JL82	47k
W76EGV023X015	16:9	138V	JL82	47k

⚠ Use isolating mains transformer - Utiliser un transformateur isolateur du secteur -Einen Trenntrafo verwenden
Utilizar un transformador aislador de red - Utilizzare un trasformatore per isolarvi dalla rete

SCANNING - BALAYAGE - ABLENKUNG - BARRIDO - SCANSIONE



TV ASY A59EHJ43X15 00	
TV ASY A66EHJ43X15 00	
Tube 4/3 25", 28" , MP /Vectorgun	
10518330	TV PSD CT 17061 32
CL21	14N0F +3.5% -3.5% 1K5V
CL22	30N0F +5% -5% 400.0V
CL24	470N0F +5% -5% 250.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	CPM 10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL81	0 OHM +0% 100MI0W
JP80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10546610 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
LL26	LL 30U5H 2519 A0
RF04	1R21 OHM +1% 700MI0W
RF05	1R0 OHM +1% 700MI0W
RF05	1R21 OHM +1% 700MI0W
RF06	12R1 OHM +1% 100MI0W
RL02	10K0 OHM +5% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL02	499R0 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL03	11K5 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL04	20K0 OHM +1% 100MI0W
RL04	11K5 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL05	20K0 OHM +1% 100MI0W
RL05	11K5 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL06	11K5 OHM +1% 100MI0W
RL11	4R7 OHM +10% 250MI0W
RL11	4R7 OHM +5% 250MI0W
RL19	22K0 OHM +5% 100MI0W
RL19	33K0 OHM +5% 100MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 250MI0W
RL43	68K1 OHM +1% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL45	270K0 OHM +5% 100MI0W
RL46	12K0 OHM +5% 100MI0W
RL47	33K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL48	60K4 OHM +1% 100MI0W
RL64	8K25 OHM +1% 100MI0W
RL65	RCF 24K0 OHM +5% 250MI0W
RV20	RMF 33K2 OHM +1% 250MI0W
RV20	33K2 OHM +1% 100MI0W
ZL13	PROTEC MOD MP63 630MI0 A 65.0V

⚠ Indicates critical safety components, and identical components should be used for replacement. Only then can the operational safety be garanteed.

Le remplacement des éléments de sécurité (repérés avec le symbole ⚠) par des composants non homologués selon la Norme CEI 65 entraine la non-conformité de l'appareil.
Dans ce cas, la responsabilité du fabricant n'est plus engagée.

Wenn Sicherheitsteile (mit dem Symbol ⚠ gekennzeichnet) durch nicht normgerechte Teile ersetzt werden, erlischt die Haftung des Herstellers.

La sostituzione degli elementi di sicurezza (contrassegnati con il segno ⚠) con componenti non omologati secondo la norma CEI 65 comporta la non conformitá dell'apparecchio.
In tal caso é “esclusa la responsabilità” del costruttore.

La subtitución de elementos de seguridad (marcados con el simbolo ⚠) por componentes no homologados segun la norma CEI 65, provoca la no conformidad del aparato.
En ese caso, el fabricante cesa de ser responsable.

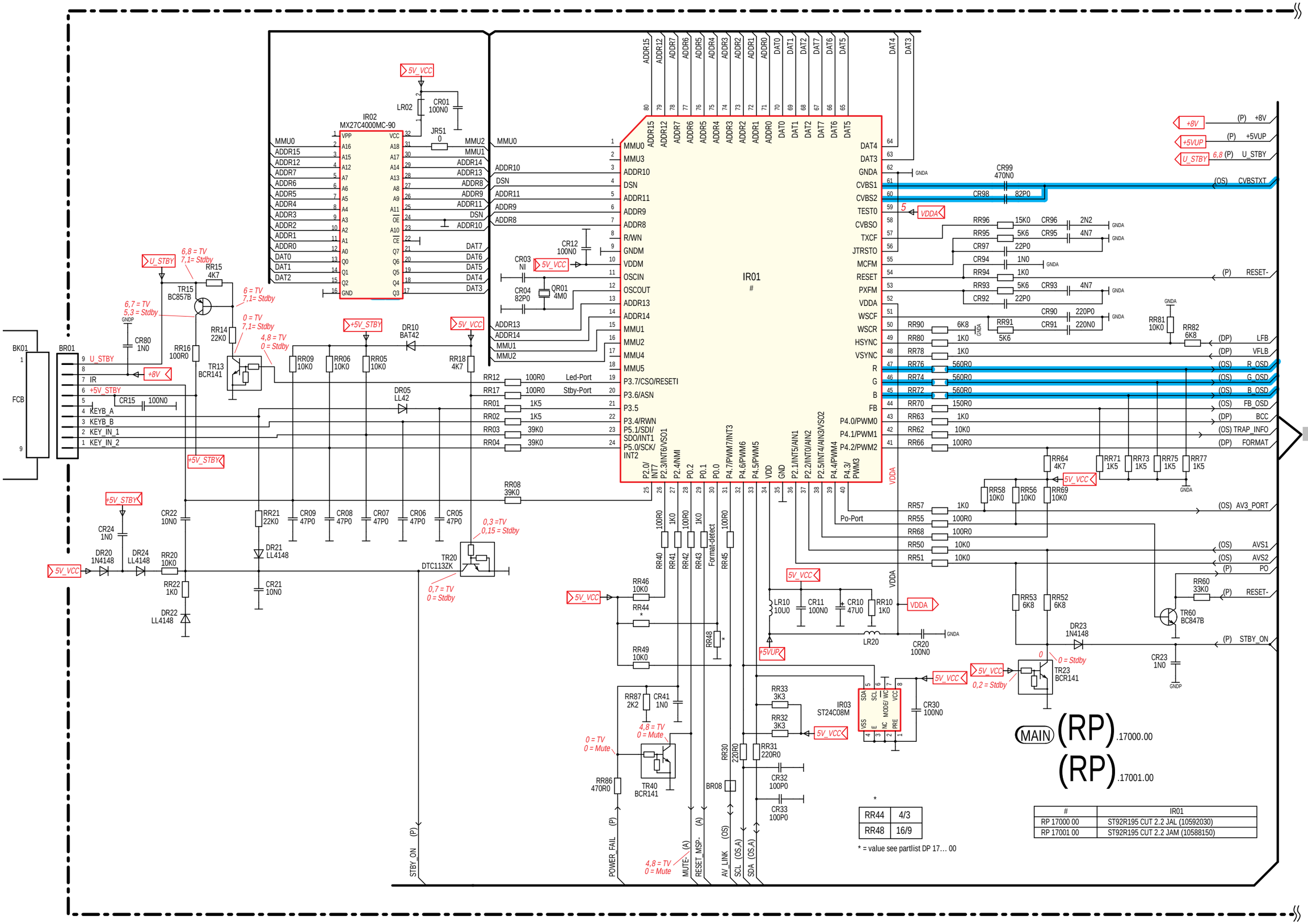
TV ASY A80AEJ15X01 (A) 00	
Tube 4/3 33" , MP	
10575830	TV PSD CT 17062 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	560N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 11
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 26U5H +10%
RF05	1R21 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	6K81 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	150K0 OHM +5% 100MI0W
RL48	76K8 OHM +1% 100MI0W
RL49	560K0 OHM +5% 100MI0W
RL65	RCF 4K7 OHM +5% 250MI0W
RV20	RMF 23K7 OHM +1% 250MI0W

TV ASY A51EFS83X191 03	
Tube 4/3 21" OT	
10555770	TV PSD CT 17035 26
CL21	8N3F +3.5% -3.5% 1K6V
CL22	33N0F +5% -5% 1K0V
CL24	440N0F +5% -5% 250.0V
CL41	1N0F +10% -10% 50.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 18U0H +7% -7%
LL05	TF-DST M30FBC3 10555640 3087 A0
LL22	LF 650U0H +5% -5% R 2873 A0 00
LL26	LL 85U0H 2519 A0
RF05	1R5 OHM +1% 700MI0W
RF06	10R0 OHM +1% 100MI0W
RL02	6K04 OHM +1% 100MI0W
RL03	10K0 OHM +1% 100MI0W
RL04	10K0 OHM +1% 100MI0W
RL05	10K0 OHM +1% 100MI0W
RL06	3K32 OHM +1% 100MI0W
RL45	110K0 OHM +5% 100MI0W
RL49	60K4 OHM +1% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	23K7 OHM +1% 250MI0W

TV ASY A59EGD048X30 19 TV ASY A68EGD038X30 (A) 68 00	
Tube 4/3 25" SF, 29" SF	
10515520	TV PSD CT 17071 26
CL21	16N2F +3.5% -3.5% 1K6V
CL22	30N0F +5% -5% 400.0V
CL24	510N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	10N0F +10% 63.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C30 30V 500MI0W
JL60	WIREBARE 22
JL80	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 TBD 13
LL22	LF 650U0H +5% -5%
LL26	LL 26U5H +10%
RF05	RMF 1R0 OHM +1% 700MI0W
RL02	6K8 OHM +5% 100MI0W
RL03	4K75 OHM +1% 100MI0W
RL04	4K75 OHM +1% 100MI0W
RL05	4K75 OHM +1% 100MI0W
RL06	4K75 OHM +1% 100MI0W
RL19	15K0 OHM +5% 100MI0W
RL45	180K0 OHM +5% 100MI0W
RL48	100K0 OHM +5% 100MI0W
RL49	300K0 OHM +5% 100MI0W
RL65	4K7 OHM +5% 250MI0W
RV20	33K2 OHM +1% 250MI0W

TV ASY W56EGV023X015 56 01 TV ASY W66EGV023X015 66 00 TV ASY W76EGV023X015 (A) 00	
Tube 16/9 24", 28",32", SF / vectorgun	
10515530	TV PSD CT 17083 38
CL21	15N5F +3.5% -3.5% 1K6V
CL22	27N0F +5% -5% 400.0V
CL24	440N0F +5% -5% 250.0V
CL41	100P0F +10% -10% 50.0V
CL48	100N0F +5% 63.0V
CL51	290N0F +5% -5% 250.0V
DL48	D-SLP BAV103 200.0V
DL71	D-ZENER BZX55C24 24V 500MI0W
JL60	WIREBARE 22
JL82	0 OHM +0% 100MI0W
LB02	LF 32U0H +4% -4%
LL05	TF-DST TDS29 15314460 10
LL22	LF 650U0H +5% -5%
LL26	LL 30U5H 2519 A0
RF05	1R21 OHM +1% 700MI0W
RL02	4K99 OHM +1% 100MI0W
RL03	6K49 OHM +1% 100MI0W
RL04	6K49 OHM +1% 100MI0W
RL05	6K49 OHM +1% 100MI0W
RL06	2K37 OHM +1% 100MI0W
RL19	13K0 OHM +5% 100MI0W
RL45	390K0 OHM +5% 100MI0W
RL48	220K0 OHM +5% 100MI0W
RL49	180K0 OHM +5% 100MI0W
RL65	47K0 OHM +5% 250MI0W
RV20	100K0 OHM +1% 250MI0W

CONTROL MICROPROCESSOR - MICROPROCESSEUR DE COMMANDE - MIKROPROZESSOR - MICROPROCESSORE DEI COMANDI - MICROPROCESADOR DE LOS MANDOS



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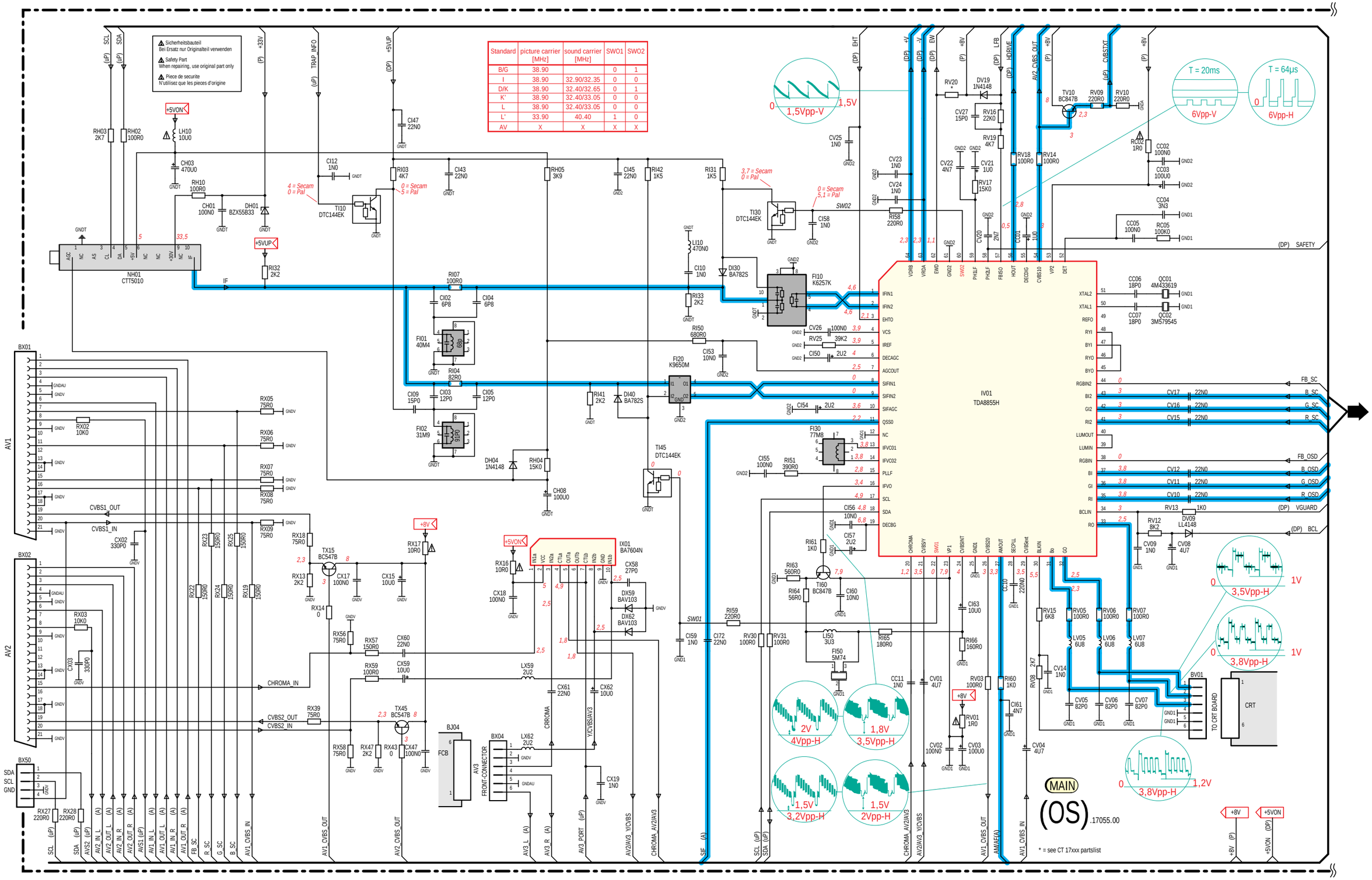
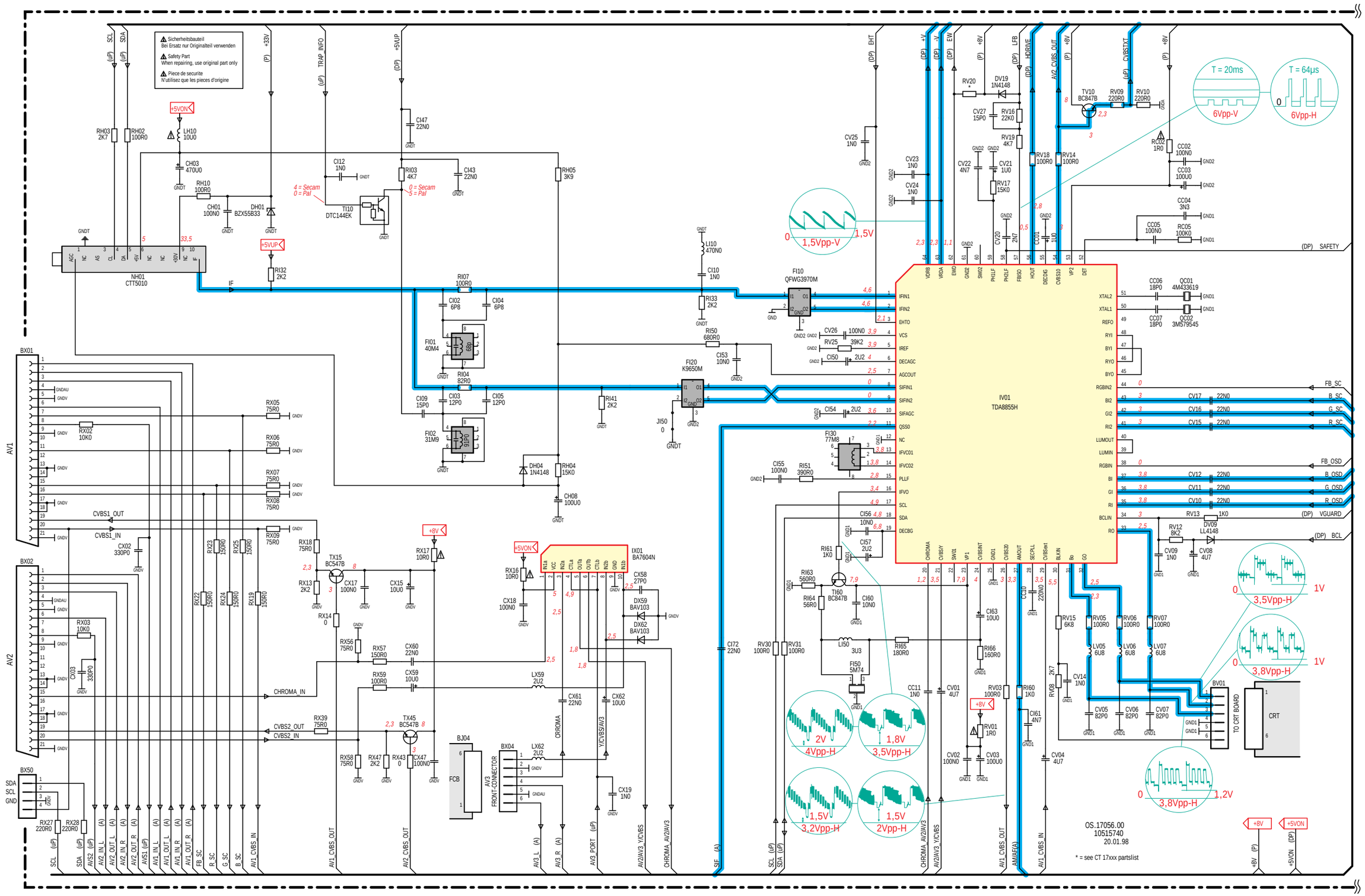
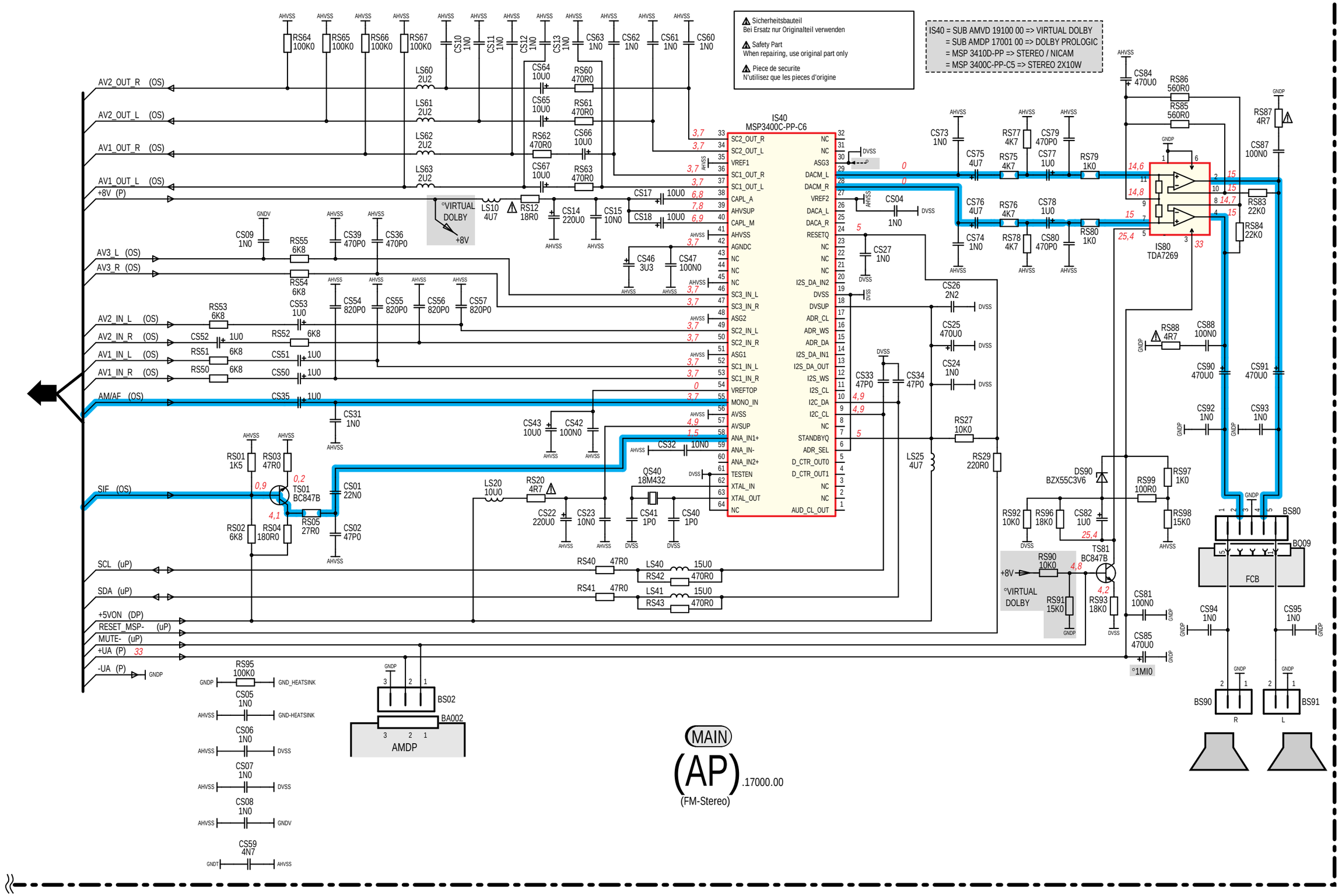
RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR / TRATAMENTO VIDEO



RF/FI/ SCART INTERFACE/VIDEO SIGNAL PROCESSING -HF/FI INTERFACE PERITELEVISION/TRAITEMENT LUMINANCE CHROMINANCE - HF/ZF/ SCART INTERFACE/VIDEO SIGNALVERARBEITUNG - RF/FI /PRESA PERITEL/ELABORAZIONE VIDEO - RF/FI /EUROCONECTOR/TRATAMENTO VIDEO



AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE ESQUEMA DEL AMPLIFICADOR
(STEREO)



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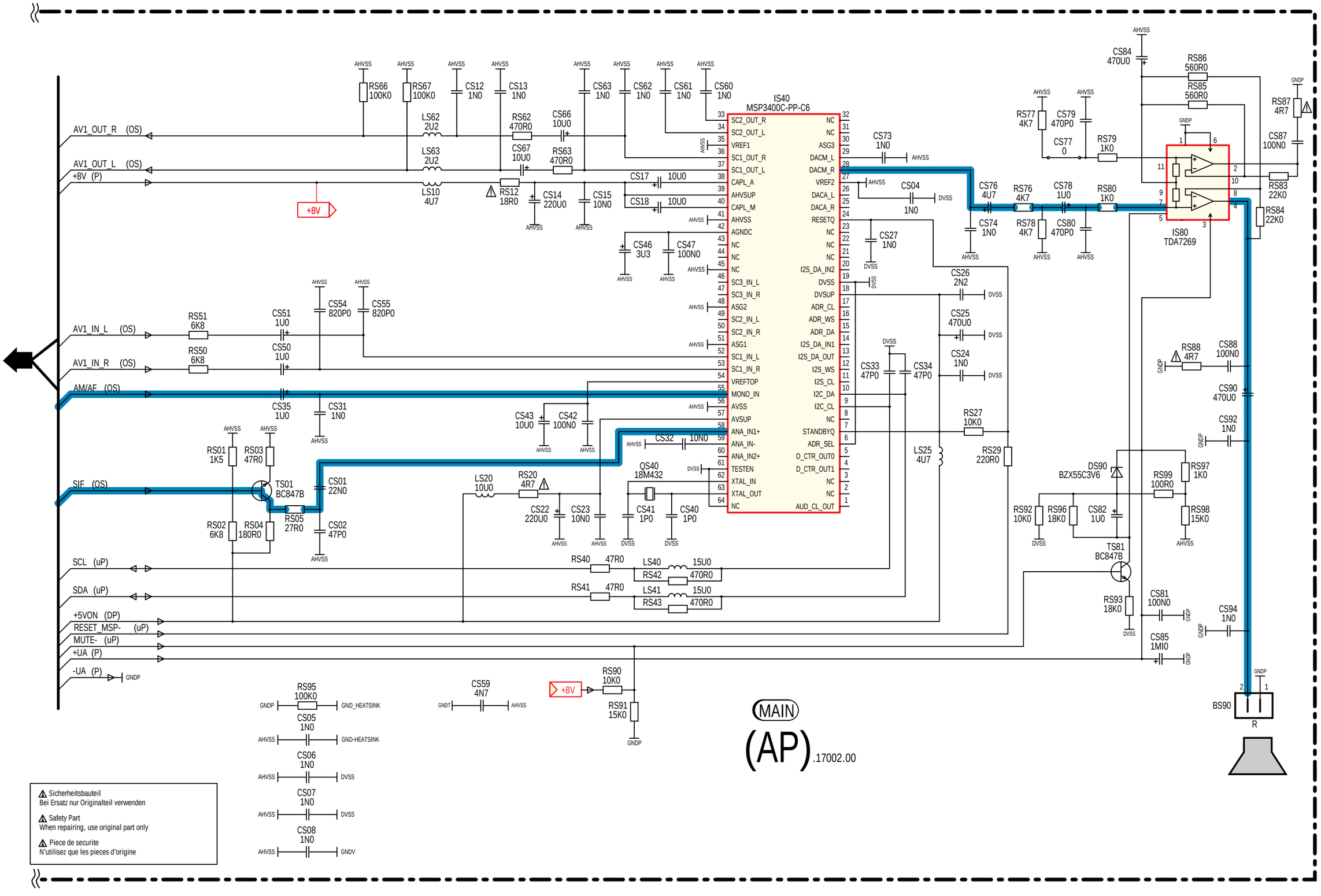
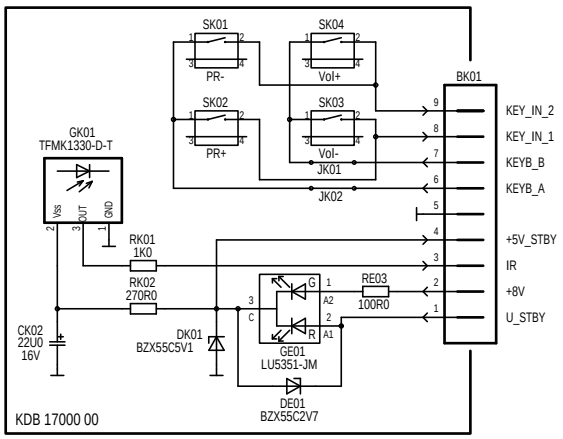
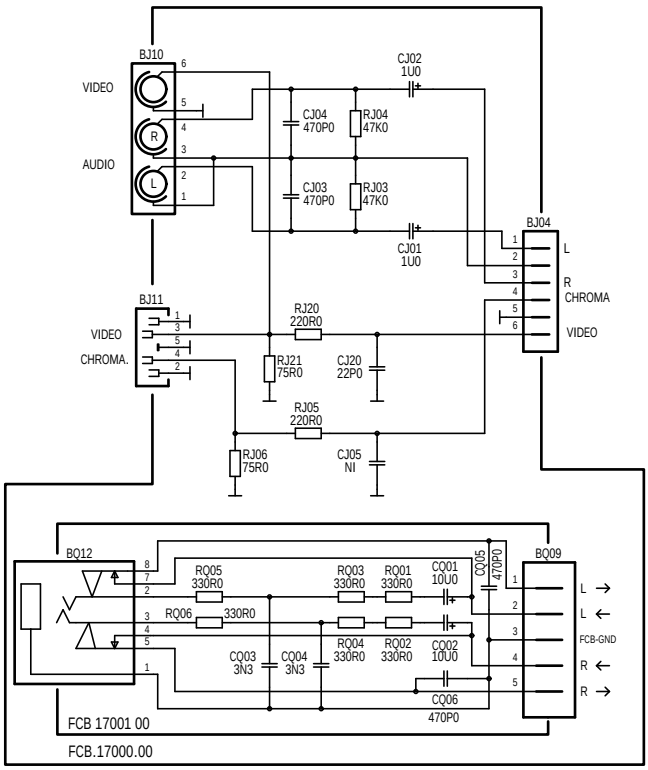
AMPLIFIER SCHEMATIC DIAGRAM - SCHEMA DE L'AMPLIFICATEUR - SCHALTBILD AUDIO-SIGNALVERABEITUNG - SCHEMA DELL' AMPLIFICATORE - ESQUEMA DEL AMPLIFICADOR
(MONO)

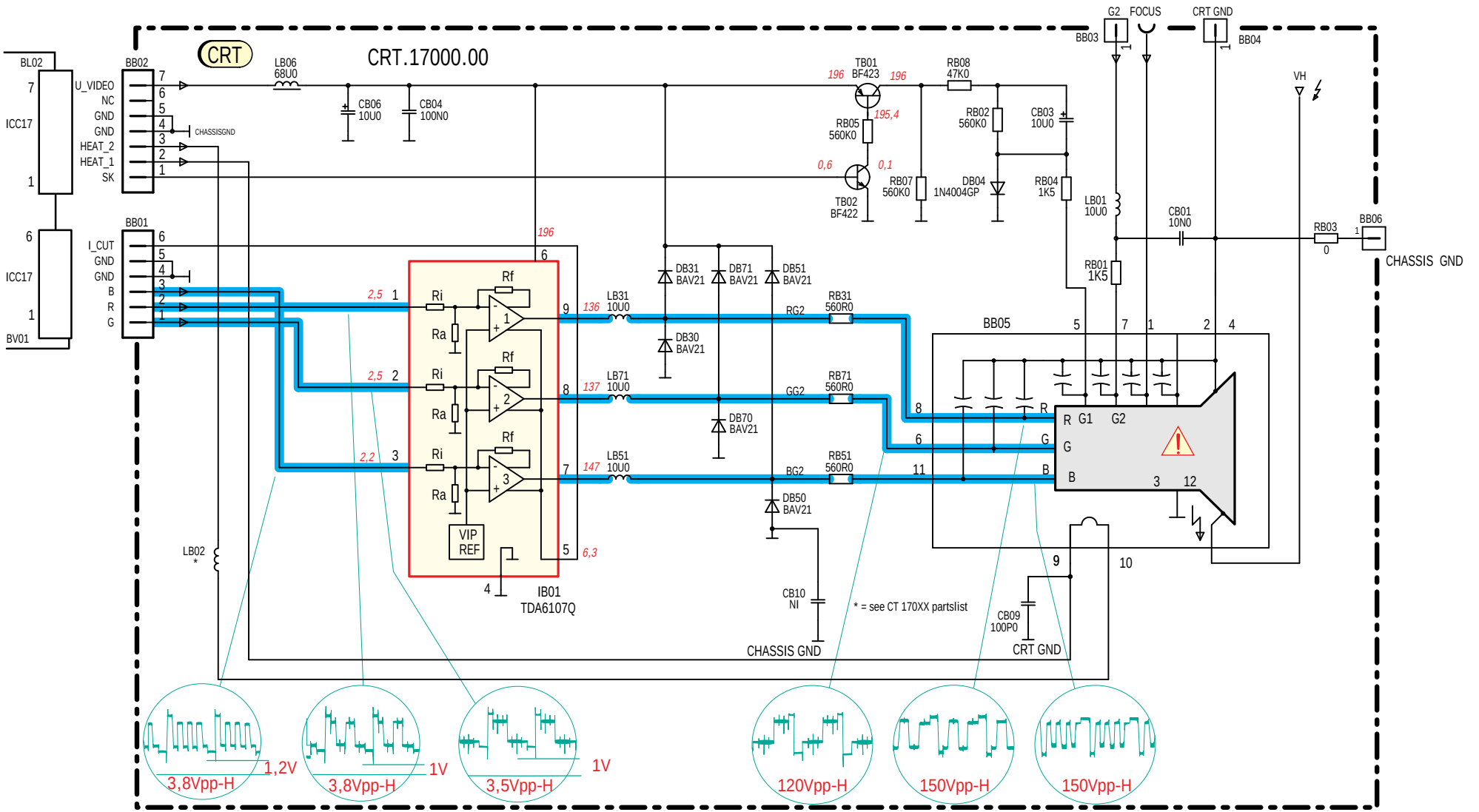


KEY BOARD AND FRONT CONNECTOR BOARD
MODULE PRISE EN FACADE ET INTERCONNEXION DU CLAVIER
TASTATUR UND FRONT ANSCHLUSSPLATTE - PIASTRA CONNESSIONE
PLACA TECLADO Y CONECTORES FRONTALES





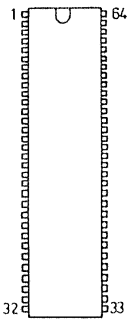
VIDEO AMPLIFIER BOARD - PLATINE AMPLIFICATEURS VIDEO - VIDEOVERSTÄRKERPLATTE - PIASTRA AMPLIFICATORE VIDEO - PLATINA AMPLIFICADOR VIDEO



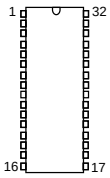
LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS- ABKÜRZUNGEN LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **+USYS:** System voltage
- **+U_VIDEO:** Video drive voltage for the CRT board
- **+ STDBY_ ON:** Standby data (0V standby , 0.6v switched ON)
- **+5V DST:** 5v unregulated voltage from the DST to supply the tuner and audio MSP device
- **+5V ON:** 5v regulated voltage from the DST to supply the tuner and audio MSP device
- **+5V UP :** Microprocessor supply voltage
- **BCL:** Beam current limiting information
- **CVBS:** Composite video / luminance signal
- **CVBS_OUT:** Composite video output
- **CVBS_TXT:** Composite video for teletext extraction
- **DEGAUSS:** Degauss signal
- **EW :** East / West
- **FORMAT / BC:** Full white control DATA depending on 16/9 selected format
- **HDRV:** Horizontal deflection signal
- **HTR1 / HTR2:** Heater voltage from the DST to CRT PCB
- **LFB:** L ine Fast Blanking
- **MUTE :** Mutes audio amplifiers
- **PO:** “Power ON “ IP95 : reset activated and output = 8v “PO” = 5v when TV is working in normally
- **POWER_FAIL:** Detection of mains supply and deflection stage failures
- **RESET:** Microprocessor reset signal
- **SAFETY:** Safety information from the deflection stage
- **SCL:** Serial Clock
- **SDA :** Serial Data
- **SIF:** Sound IF
- **TRAP_INFO:** 31.4Mhz IF trap activation
- **U_ STANDBY:** Standby voltage
- **U_DRIVER:** Horizontal sync signal from TDA8855H
- **U_TIMER:** 11v voltage used during “Switch ON “ phase and “Wake Up“ mode
- **V FLB:** Vertical flyback reference for the microprocessor
- **V GUARD:** Safety data generated by the vertical amplifier TDA 8351
- **V_RETRACE:** 42 / 48volts (depending on tube type) generated by the DST and used for vertical blanking
- **V_SUPPLY:** 13.5 to 15.5 volts (depending on tube type) generated by the DST

INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE -
CIRCUITS INTEGRES ET TRANSISTORS
INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN -
CIRCUITI INTEGRATI TRANSISTOR
CIRCUITOS INTEGRADOS Y TRANSISTORES



MPS3400C-PP-C6



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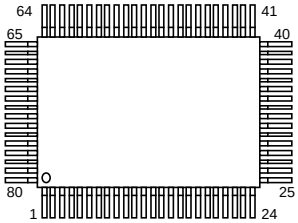
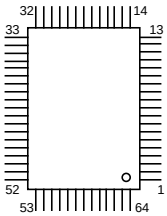
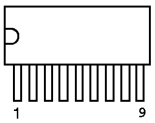


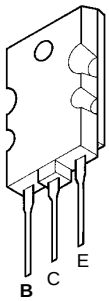
ST92R195



TDA8855H



TDA8351



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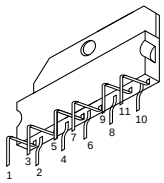

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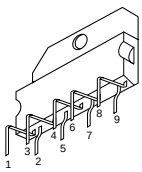
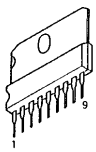
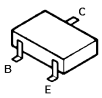


TDA6107Q

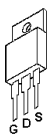


TDA 8139



BC 847B
BC 857B
BCR141
BCR191
DTC113ZK
DTC144EK
TN1401

ST24C08-M
TS3702CD



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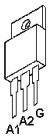
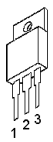
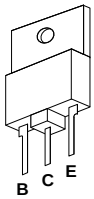


BT806 -600C



MC7812/CT



BD241C

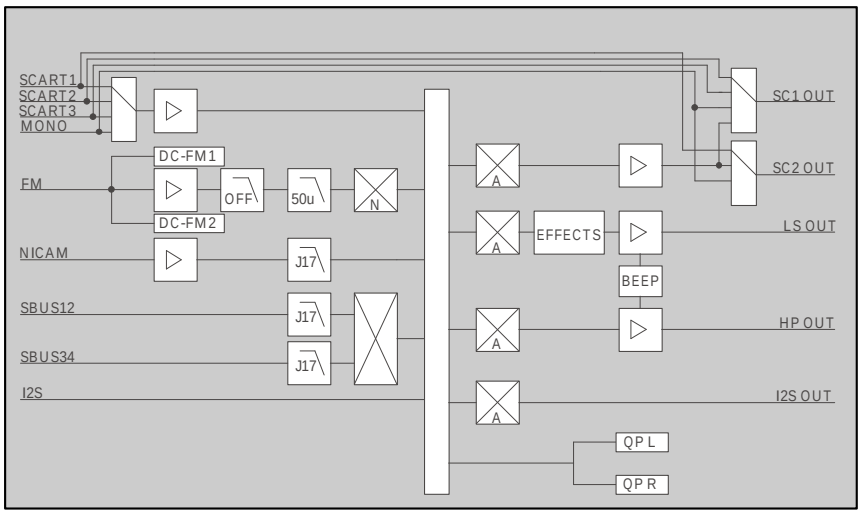
BC 337
BC 546B
BC 547B

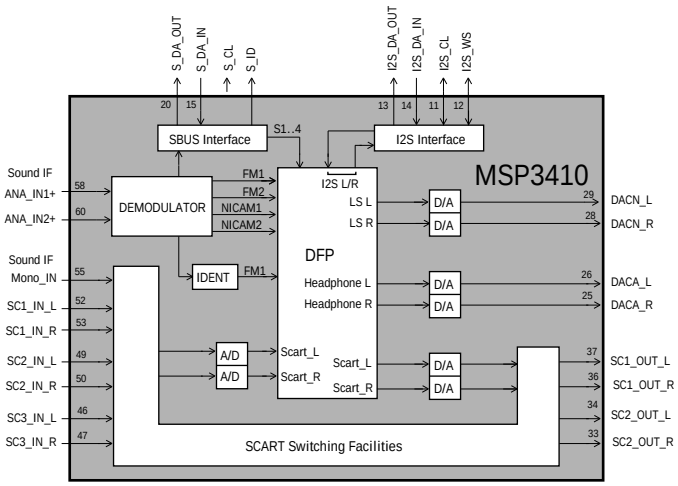
BF 422
BF423
2SA1020Y
2SC2236Y

MPS750

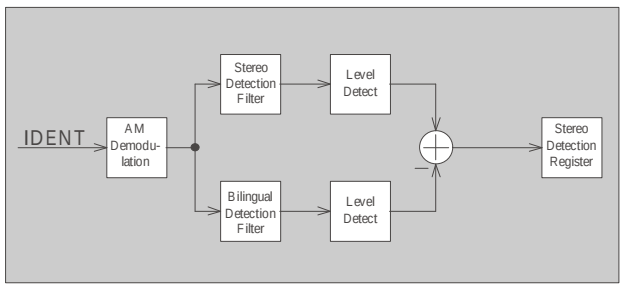
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

Audio baseband processing of the MSP3410

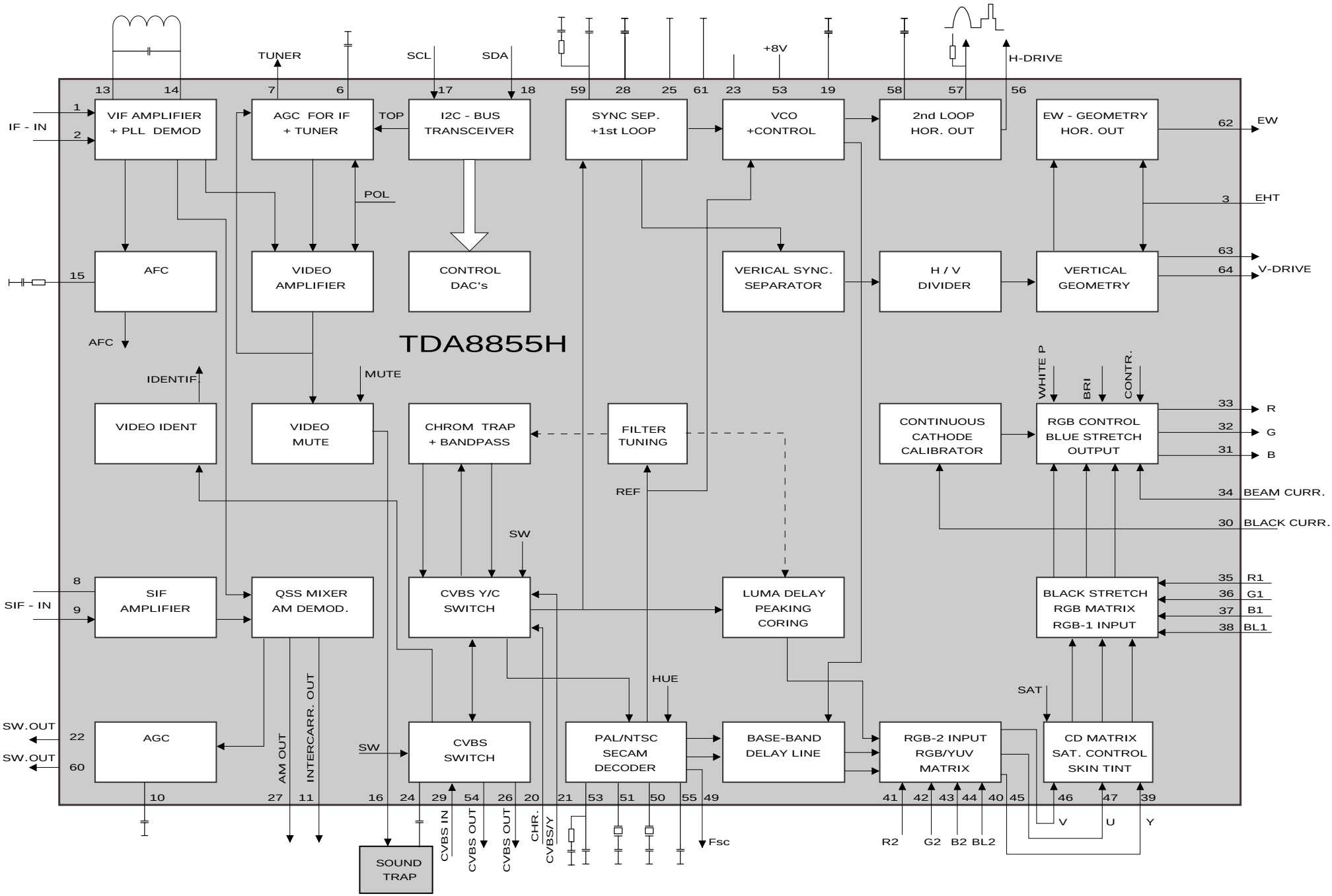




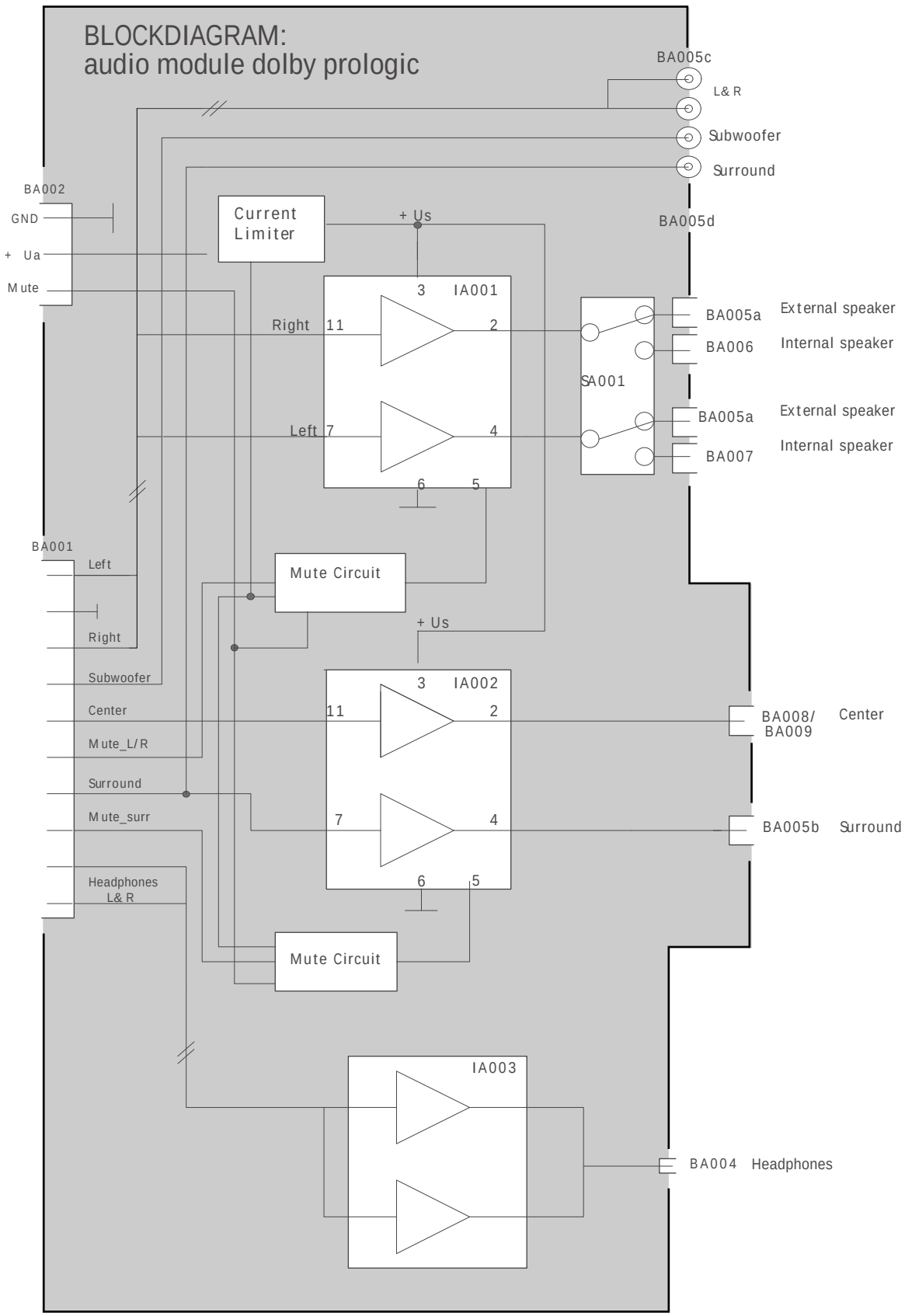
Detection part of the MSP 3410



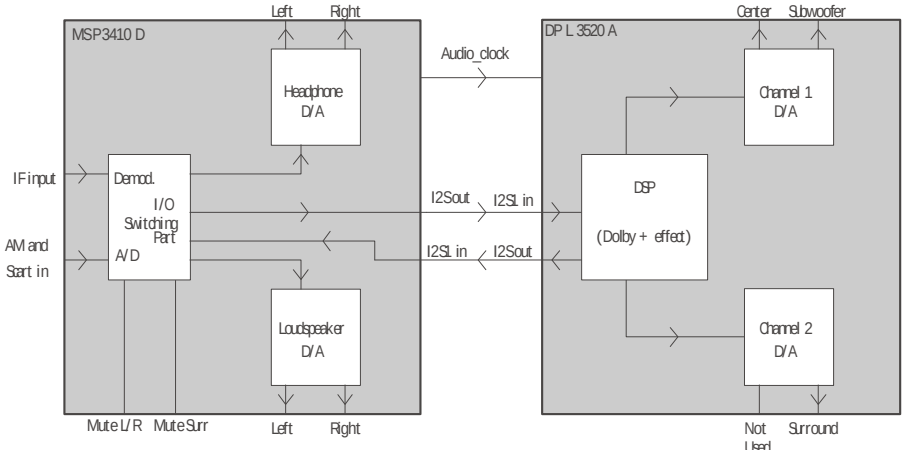
IV01 TDA 8855H



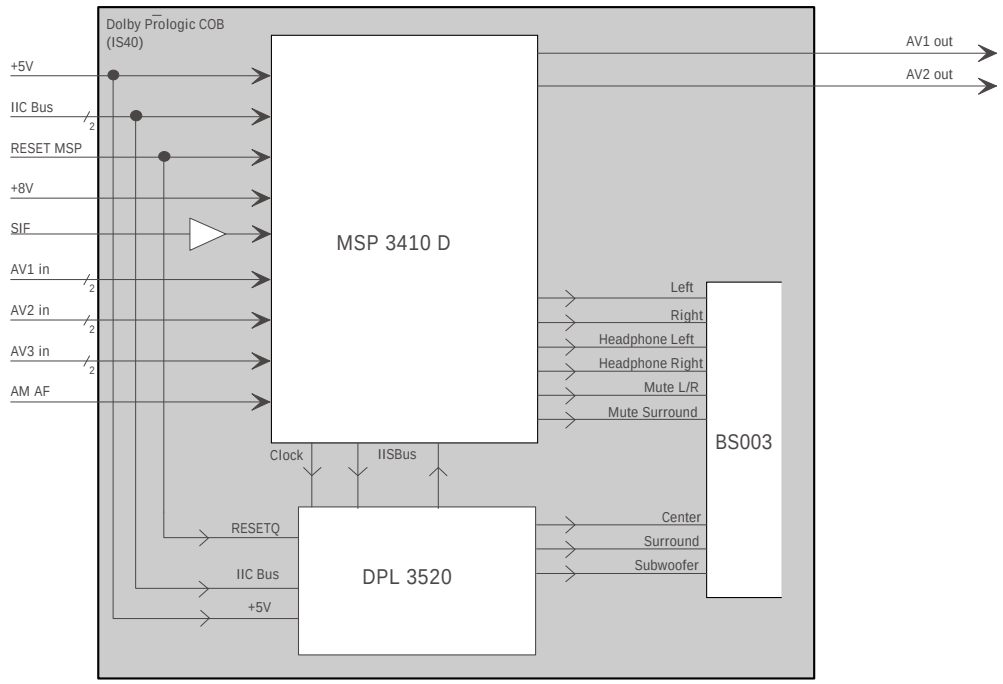
BLOCK DIAGRAM (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA SYNOPTIQUE (AUDIO MODULE DOLBY PROLOGIC)
BLOCKSCHALTBILD (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA A BLOCCI (AUDIO MODULE DOLBY PROLOGIC)
ESQUEMA DE BLOQUES (AUDIO MODULE DOLBY PROLOGIC)



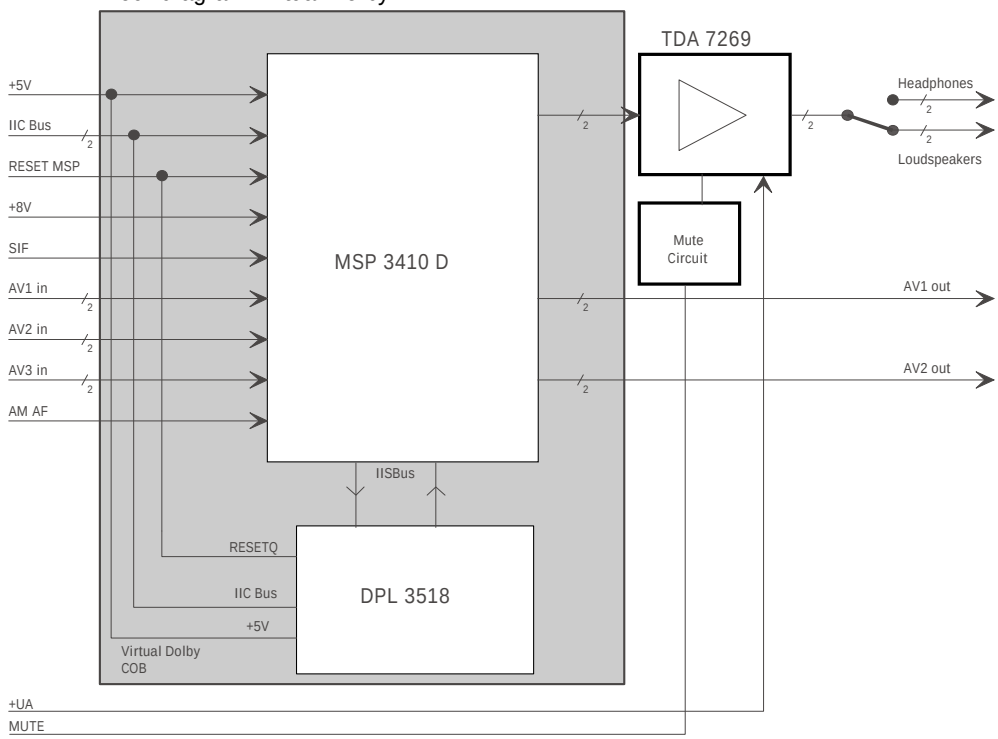
Interface requirement audio part with Dolby Prologic



Block diagram Dolby Prologic



Block diagram Virtual Dolby



IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE

IRIS

CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATION(S)/SOFTWARE/ MODE
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
X	NO SYMPTOM OR PROBLEM FOUND

(*1)
CAUTION
THE 'X' EXTENDED SYMPTO CODES (*-**X) SHOUL ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE	5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
1	GENERAL	**110**	**POWER PROBLEM** 111 NO POWER ON AC 112 NO POWER WHEN USING AC-ADAPTER 113 NO POWER WHEN USING DRY BATTERIES 114 NO POWER WHEN USING RECHARGEABLE BATTERIES 115 NO POWER FROM SOLAR CELL 116 NO POWER WHEN USING A CAR BATTERY 117 SHORT OPERATION TIME/SHORT BATTERY LIFE 118 POWER-OFF FUNCTION NOT WORKING 119 NO SWITCH-ON FROM STANDBY 11A POWERS UP, BUT NO OPERATION 11B CYCLIC POWER ON/OFF 11X OTHER POWER PROBLEM	**120**	**CHARGING PROBLEM** 121 NO BATTERY CHARGING 122 INCOMPLETE BATTERY CHARGE 12X OTHER CHARGING PROBLEM	**130**	**DISPLAY FUNCTION PROBLEM** 131 FAULTY TIMER/COUNTER DISPLAY 132 FAULTY LAMP/LED OPERATION 133 FAULTY LEVEL METER OPERATION 134 FAULTY ON-SCREEN DISPLAY OPERATION 135 ELECTRONIC TUNING DISPLAY FAULT 136 MECHANICAL TUNING DISPLAY FAULT 137 FAULTY TIME CODE DISPLAY 138 FAULTY ALARM/ERROR DISPLAY 139 DISPLAY DIM 13X OTHER DISPLAY FUNCTION PROBLEM	**140**	**ABNORMAL NOISE** 141 CRT DISCHARGING NOISE 142 EHT DISCHARGING NOISE 143 NOISY CABINET 144 NOISY TRANSFORMER 145 NOISY COMPONENT(S) 146 RATTLE 14X OTHER ABNORMAL NOISE	**150**	**REMOTE CONTROL PROBLEM** 151 NO REMOTE CONTROL OPERATION 152 INCORRECT REMOTE CONTROL OPERATION 153 REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM 154 POOR REMOTE CONTROL SENSITIVITY 15X OTHER REMOTE CONTROL PROBLEM	**160**	**PHYSICAL DAMAGE** 161 DAMAGED CABINET 162 DAMAGED HANDLE 163 DAMAGED CONTROL KNOB(S)/BUTTON(S) 164 DAMAGED DOOR/COVER 165 DAMAGED SEAL 166 DAMAGED PLUG OR SOCKET 167 DAMAGED LENS 168 DAMAGED CARTRIDGE OR STYLUS 169 DAMAGED ANTENNA 16A DAMAGED CRT OR VIEWFINDER 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS 16C PRINTED MARKINGS ERASED/PEELED OFF 16X OTHER PHYSICAL DAMAGE	**170**	**GENERAL FUNCTION PROBLEM** 171 FAULTY CLOCK FUNCTION 172 FAULTY SLEEP FUNCTION 173 FAULTY TIMER PROGRAMMING 174 FAULTY TIMER RECORDING 175 SOFTWARE PROGRAMMING PROBLEM 176 FAULTY RECORD MUTE OPERATION 177 FAULTY PROGRAMMED PLAYBACK OPERATION 178 FAULTY MEMORY FUNCTION 17X OTHER GENERAL FUNCTION PROBLEM	**180**	**SPECIAL REQUIREMENTS** 181 TEST AND CHECK 182 GENERAL OVERHAUL 183 SYSTEM/FREQUENCY CONVERSION 184 INITIAL SETUP REQUESTED 185 MODIFICATION/CIRCUIT CHANGE 186 WRONG SET IN CARTON 18X OTHER SPECIAL REQUIREMENTS 18Z SYMPTOM NOT AVAILABLE
2	COMMUNICATION	**210**	**NO RECEPTION** 211 NO AM RECEPTION 212 NO FM RECEPTION 213 NO SW RECEPTION 214 NO VHF RECEPTION 215 NO UHF RECEPTION 216 NO BS RECEPTION 217 NO CS RECEPTION 218 NO HDTV RECEPTION 219 NO QPS RECEPTION 21X OTHER 'NO RECEPTION' PROBLEM	**220**	**POOR RECEPTION** 221 POOR AM RECEPTION 222 POOR FM RECEPTION 223 POOR SW RECEPTION 224 POOR VHF RECEPTION 225 POOR UHF RECEPTION 226 POOR BS RECEPTION 227 POOR CS RECEPTION 228 POOR HDTV RECEPTION 229 POOR QPS RECEPTION 22X OTHER 'POOR RECEPTION' PROBLEM	**230**	**TRANSMISSION PROBLEM** 231 NO TRANSMISSION 232 POOR TRANSMISSION 233 TRANSMISSION LEVEL TOO HIGH 234 NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET 235 POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET 23X OTHER TRANSMISSION PROBLEM	**240**	**NOISY RECEPTION/ TRANSMISSION** 241 LINE NOISE 242 OSCILLATION 243 INTERSTATION INTERFERENCE 24X OTHER NOISE RECEPTION/TRANSMISSION PROBLEM	**250**	**UNSTABLE RECEPTION/ TRANSMISSION** 251 TUNING DRIFT 252 FADING 25X OTHER UNSTABLE RECEPTION/ TRANSMISSION PROBLEM	**260**	**TUNING PROBLEM** 261 MANUAL TUNING PROBLEM 262 AUTOMATIC TUNING PROBLEM 263 INCORRECT TUNING 264 TUNING MEMORY PROBLEM 26X OTHER TUNING PROBLEM	**270**	**SPECIAL COMMUNICATION PROBLEM** 271 FAULTY DIALLING 272 FAULTY CHANNEL SELECTION 273 FAULTY AUTO-ANSWER OPERATION 274 FAULTY MESSAGE READ-OUT FUNCTION 275 FAULTY AUTODIAL MEMORY 276 FAULTY SPEECH PROCESSING 277 NO RINGING TONE 278 WEAK RINGING TONE 27X OTHER SPECIAL COMMUNICATION PROBLEM	**280**	**SPECIAL RECEPTION PROBLEM** 281 FAULTY STEREO RECEPTION 282 FAULTY MAIN CHANNEL (A) FUNCTION 283 FAULTY SUB-CHANNEL (B) FUNCTION 284 FAULTY SSB RECEPTION 285 FAULTY RDS/VPS OPERATION 286 FAULTY TELETEXT RECEPTION 287 FAULTY SATELLITE/RTTY RECEPTION 288 FAULTY FAX OPERATION 28X OTHER SPECIAL RECEPTION PROBLEM
3	PICTURE	**310**	**NO PICTURE** 311 NO PICTURE IN E TO E MODE 312 NO PICTURE IN PLAYBACK MODE 313 NO PICTURE IN VIEWFINDER 314 NO PICTURE, ONLY RASTER 315 NO RASTER, BLACK PICTURE 316 ONLY HORIZONTAL LINE 317 ONLY VERTICAL LINE 31X OTHER 'NO PICTURE' PROBLEM	**320**	**PICTURE LEVEL PROBLEM** 321 PICTURE TOO DARK 322 PICTURE TOO BRIGHT 323 CONTRAST TOO LOW 324 CONTRAST TOO HIGH 325 SATURATED WHITE OR BLACK LEVEL 326 SHADING ON PICTURE 327 ONLY PARTIAL PICTURE 32X OTHER PICTURE LEVEL PROBLEM	**330**	**PICTURE QUALITY PROBLEM** 331 POOR PICTURE RESOLUTION 332 POOR FOCUS 333 RINGING ON PICTURE 334 EXCESSIVE SMEAR/LAG 335 POOR LINEARITY OR GEOMETRY 336 PICTURE SIZE INCORRECT 337 INCORRECT CENTRING OF PICTURE 338 PICTURE SLANTED 339 V-SIZE INCORRECT 33A H-SIZE INCORRECT 33X OTHER PICTURE QUALITY PROBLEM	**340**	**PICTURE NOISE** 341 SNOWY PICTURE 342 DOT NOISE OR DROPOUT ON PICTURE 343 NOISE BARS ON PICTURE 344 BLANKING LINES ON PICTURE 345 BEATING O PICTURE 346 GHOSTING ON PICTURE 347 VCR HEAD SWITCHING NOISE ON PICTURE 348 OVERMODULATION NOISE 34X OTHER PICTURE NOISE PROBLEM	**350**	**UNSTABLE PICTURE** 351 SYNC PROBLEM 352 PICTURE PUMPING 353 PICTURE JITTER 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL) 355 FLICKERING PICTURE 356 FLASHING PICTURE 357 CYCLIC PICTURE MUTING 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE 359 VCR SKEW ERROR 35A FROZEN PICTURE 35B JUMPING/REPEATING PICTURE 35X OTHER 'UNSTABLE PICTURE' PROBLEM	**360**	**POOR PICTURE RECORDING** 361 NO PICTURE RECORDING 362 NO ERASURE PROTECTION FOR VIDEO 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED 364 UNWANTED ERASURE OF PICTURE 365 NO CAMERA RECORDING 366 ONLY ONE FIELD PER FRAME BEING RECORDED 36X OTHER PICTURE RECORDING PROBLEM	**370**	**SPECIAL PICTURE FUNCTION PROBLEM** 371 EDITING PROBLEM 372 FAULTY FADING/WIPER OPERATION 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION 374 FAULTY SUPERIMPOSE/TELOP OPERATION 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION 376 FAULTY PICTURE TRANSMISSION 377 FAULTY DIGITAL SHUTTER FUNCTION 378 FAULTY GENLOCK FUNCTION 379 FAULTY FLASH/STROBE FUNCTION 37A FAULTY DIGITAL PICTURE FUNCTION 37B FAULTY AUTO-EDIT FUNCTION 37X OTHER SPECIAL PICTURE FUNCTION PROBLEM	**380**	**PICTURE DISPLAY/PICKUP PROBLEM** 381 BURN MARK ON DISPLAY/PICKUP 382 SCRATCH ON DISPLAY/PICKUP 383 DUST/DIRT ON DISPLAY/PICKUP 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL 38X OTHER PICTURE DISPLAY/PICKUP PROBLEM
4	COLOUR	**410**	**NO COLOUR** 411 NO COLOUR IN E TO E MODE 412 NO COLOUR IN PLAYBACK MODE 413 NO COLOUR IN VIEWFINDER 414 NO COLOUR IN PART OF PICTURE 41X OTHER 'NO COLOUR' PROBLEM	**420**	**COLOUR LEVEL PROBLEM** 421 WEAK COLOUR 422 EXCESSIVE COLOUR 42X OTHER COLOUR LEVEL PROBLEM	**430**	**POOR COLOUR QUALITY** 431 SOME OR ALL COLOURS MISSING 432 POOR WHITE BALANCE 433 HUE PROBLEM 434 PURITY ERROR 435 LANDING ERROR 436 CONVERGENCE ERROR 437 REGISTRATION ERROR 438 PITCH MOIR... 43X OTHER COLOUR QUALITY PROBLEM	**440**	**NOISY COLOUR** 441 COLOUR NOISE ON A BLACK & WHITE PICTURE 442 COLOUR STREAKING 44X OTHER COLOUR NOISE PROBLEM	**450**	**UNSTABLE COLOUR** 451 COLOUR FLASHING 452 HUE CONSTANTLY CHANGING 453 FLICKERING COLOUR 454 COLOUR NOT LOCKED 45X OTHER UNSTABLE COLOUR PROBLEM	**460**	**POOR COLOUR RECORDING** 461 NO COLOUR RECORDING 46X OTHER COLOUR RECORDING PROBLEM	**470**	**SPECIAL COLOUR FUNCTION PROBLEM** 471 FAULTY AUTOMATIC WHITE BALANCE 472 FAULTY COLOUR EFFECTS FUNCTION 47X OTHER SPECIAL COLOUR FUNCTION PROBLEM	**480**	
5	AUDIO	**510**	**NO AUDIO** 511 NO SOUND IN E TO E MODE 512 NO PLAYBACK OF OUTGOING MESSAGE(S) 513 NO PLAYBACK OF INCOMING MESSAGE(S) 51X OTHER 'NO AUDIO' PROBLEM	**520**	**AUDIO LEVEL PROBLEM** 521 LOW AUDIO LEVEL 522 EXCESSIVE AUDIO LEVEL 523 BALANCE PROBLEM 524 FADER PROBLEM 525 AUDIO LEVEL REMAINING 52X OTHER AUDIO LEVEL PROBLEM	**530**	**AUDIO QUALITY** 531 POOR FREQUENCY RESPONSE 532 DISTORTED AUDIO 533 NO OR POOR TREBLE 534 NO OR POOR BASS 53X OTHER AUDIO QUALITY PROBLEM	**540**	**NOISY AUDIO** 541 HUM 542 HISS 543 CROSSTALK 544 STATIC, POP OR CLICK NOISE 545 BUZZ 546 SCRATCHING NOISE 547 IGNITION NOISE 548 MULTIPATH NOISE 54X OTHER AUDIO NOISE PROBLEM	**550**	**UNSTABLE AUDIO** 551 JUMPING OR REPEATING AUDIO 552 AUDIO PUMPING OR BREATHING 553 AUDIO DROPOUTS 554 CYCLIC AUDIO MUTING 555 WOW AND FLUTTER 556 HOWLING/ACOUSTIC FEEDBACK 55X OTHER UNSTABLE AUDIO PROBLEM	**560**	**POOR AUDIO RECORDING** 561 AUDIO NOT BEING RECORDED 562 NO ERASURE PROTECTION FOR AUDIO 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED 564 UNWANTED ERASURE OF AUDIO 565 MESSAGE NOT BEING RECORDED 56X OTHER AUDIO RECORDING PROBLEM	**570**	**POOR SPECIAL AUDIO FUNCTION** 571 FAULTY FADE OPERATION 572 FAULTY ECHO OPERATION 573 FAULTY MIXING OPERATION 574 FAULTY REPEAT MODE OPERATION 575 FAULTY AUDIO PROCESSING 576 FAULTY SYNC RECORDING OPERATION 577 FAULTY DBB/DOL OPERATION 578 FAULTY NOISE REDUCTION OPERATION 57X OTHER SPECIAL AUDIO FUNCTION PROBLEM	**580**	**STEREO/MULTI MODE OPERATION PROBLEM** 581 NO STEREO OPERATION 582 POOR CHANNEL SEPARATION 583 DIFFERENCE IN PHASE BETWEEN CHANNELS 584 PROBLEM WITH SURROUND SOUND MODE 585 PROBLEM WITH PCM AUDIO MODE 58X OTHER STEREO/MULTI MODE PROBLEM
6	MECHANISM	**610**	**NO MECHANICAL OPERATION** 611 NO DISC ROTATION 612 NO FORWARD OPERATION 613 NO REVERSE OPERATION 614 NO FAST FORWARD OR REWIND FUNCTION 615 NO LOADING 616 NO UNLOADING OR EJECTING OF TAPE 617 NO AUTO SHUT-OFF OPERATION 618 TONEARM DOES NOT MOVE 619 DISC NOT BEING EJECTED 61A MAGAZINE DOES NOT EJECT 61X OTHER 'NO MECHANICAL OPERATION' PROBLEM	**620**	**IRREGULAR MECHANICAL OPERATION** 621 IRREGULAR ROTATION 622 IRREGULAR FORWARD MODE 623 IRREGULAR REVERSE OPERATION 624 IRREGULAR FAST FORWARD OR REWIND FUNCTION 625 IRREGULAR LOADING 626 IRREGULAR UNLOADING OR EJECTING OF TAPE 627 IRREGULAR AUTO SHUT-OFF OPERATION 628 IRREGULAR TONEARM MOVEMENT 629 IRREGULAR EJECTION OF DISC 62A IRREGULAR DIRECTION CHANGE 62X OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM	**630**	**SPEED PROBLEM** 631 SPEED TOO FAST 632 SPEED TOO SLOW 63X OTHER SPEED PROBLEM	**640**	**MECHANICAL NOISE** 641 ROTATION NOISE 642 MOTOR NOISE 643 WIND NOISE 644 TAPE SQUEALING 645 FAN NOISE 646 DISC SCRAPING 647 NOISY TAPE LOADING 64X OTHER MECHANICAL NOISE PROBLEM	**650**		**660**	**DAMAGE TO SOFTWARE** 661 TAPE GETS SCRATCHED 662 DISC GETS SCRATCHED 663 TAPE GETS CHEWED/WRINKLED 664 TAPE JAMMED OR BROKEN 665 TAPE GETS CURLED 666 SLACK TAPE 667 TAPE STICKING 66X OTHER SOFTWARE DAMAGE PROBLEM	**670**	**MECHANICAL OPERATION PROBLEM** 671 FAULTY START/STOP OPERATION 672 FAULTY PAUSE OPERATION 673 FAULTY AUTOMATIC PROGRAM SEARCH 674 FAULTY CUE/REVIEW MODE 675 FAULTY SLOW MOTION OPERATION 676 FAULTY HIGH-SPEED SCANNING MODE 677 FAULTY SPEED COPY FUNCTION 678 FAULTY REPEAT OPERATION 679 FAULTY RECORD REVIEW MODE 67A FAULTY AMS OPERATION 67X OTHER MECHANICAL OPERATION PROBLEM	**680**	**LENS PROBLEM** 681 FOCUS PROBLEM 682 ZOOM PROBLEM 683 IRIS PROBLEM 684 MACRO PROBLEM 68X OTHER LENS PROBLEM
7	DATA PROCESSING	**710**	**NO DATA PROCESSING** 711 NO INITIAL SCREEN 712 SYSTEM DOES NOT RESET 713 SYSTEM DOES NOT BOOT UP 714 NO OPERATION FROM PLUG-IN MODULE 715 NO KEYBOARD OPERATION 716 NO OPERATION FROM OTHER INPUT/OUTPUT 717 NO DATA STORAGE OPERATION 718 NO DATA COMMUNICATION 71X OTHER 'NO DATA PROCESSING' PROBLEM	**720**	**FAULTY DATA PROCESSING OPERATION** 721 INCORRECT DATA 722 SYSTEM RESET WHILE BEING USED 723 SYSTEM LOCKS OUT/CRASHES 724 FAULTY OPERATION OF PLUG-IN MODULE 725 FAULTY KEYBOARD OPERATION 726 FAULTY OPERATION OF OTHER INPUT/OUTPUT 727 FAULTY DATA STORAGE OPERATION 728 FAULTY DATA COMMUNICATION 72X OTHER 'FAULTY DATA PROCESSING' PROBLEM	**730**	**DATA DISPLAY PROBLEM** 731 INCORRECT CHARACTER DISPLAY 732 MISSING DISPLAY CHARACTERS 733 FAULTY GRAPHIC DISPLAY 734 FAULTY SWITCHING BETWEEN GRAPHIC/ CHARACTER MODE 735 FAULTY PROMPT/CURSOR OPERATION 736 DATA DISPLAY COLOUR INCORRECT 737 NO PAGING OR SCROLL MODE 73X OTHER DATA DISPLAY PROBLEM	**740**		**750**		**760**	**DATA READ/WRITE PROBLEM** 761 FORMATTING PROBLEM 762 DATA ON STORAGE MEDIUM BEING LOST 763 FRAME MEMORY PROBLEM 76X OTHER DATA READ/WRITE PROBLEM	**770**	**SPECIAL DATA PROCESSING** 771 FAULTY SELF-DIAGNOSTIC MODE 772 FAULTY WORD PROCESSING FUNCTION 773 FAULTY GRAPHIC EDIT FUNCTION 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM	**780**	
8	PRINTING	**810**	**NO PRINTER OPERATION** 811 NOT PRINTING 812 NO COMMUNICATION WITH PRINTER 813 PAPER NOT LOADING 814 NO PAPER FEED 815 NO IMAGE FIXATION 81X OTHER NO PRINTER OPERATION PROBLEM	**820**	**ERRONEOUS PRINTER OPERATION** 821 PRINT IMAGE REVERSED (NEGATIVE/ POSITIVE) 822 IRREGULAR PAPER FEED 823 ERRONEOUS PRINT MODE SWITCHING 82X OTHER PRINTER OPERATION PROBLEM	**830**	**POOR PRINT QUALITY** 831 INCORRECT PRINTING POSITION 832 LOW PRINT CONTRAST 833 EXCESSIVE PRINT CONTRAST 834 BLURRED PRINT IMAGE 835 PRINT IMAGE NOT SHARP 836 DOTS MISSING-IN PRINT IMAGE 83X OTHER PRINT QUALITY PROBLEM	**840**	**NOISY PRINTING** 841 PRINTING NOISE LINES 842 DIRTY PRINTING 84X OTHER NOISY PRINTING PROBLEM	**850**	**UNSTABLE PRINTER OPERATION** 851 UNSTABLE PAPER LOADING 852 UNSTABLE MULTI-PAPER LOADING 853 INCORRECT LINE-UP OF CHARACTERS 85X OTHER UNSTABLE PRINTER OPERATION PROBLEM	**860**	**RIBBON/PAPER PROBLEMS** 861 RIBBON BROKEN 862 RIBBON STUCK/STICKING 863 RIBBON DERAILED 864 PAPER STUCK/STICKING TO MECHANISM 865 PAPER JAM 86X OTHER RIBBON/PAPER PROBLEM	**870**		**880**	**FAULTY FONT/CHARACTER FUNCTIONS** 881 INCORRECT CHARACTERS 882 INCORRECT CHARACTER SIZE 883 FONT LOADING PROBLEM 88X OTHER FAULTY FONT/CHARACTER FUNCTION PROBLEM

SECTION CODES

ANT	ANTENNA SECTION
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
APR	SIGNAL PROCESSING (ANALOG)
ARM	ARM MECHANISM
BCH	BATTERY CHARGE
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
CTR	CONTROL PANEL
DDM	DISC DRIVE MECHANISM
DFL	DEFLECTION CIRCUIT
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
EXC	EXTERNAL CONNECTOR
FDD	FLOPPY DISC DRIVE
FLX	FLEXIBLE PCB
FMW	FIRMWARE
FPK	FOCUS PACK
HCM	HEAD CARRIAGE MECHANISM

HDD	HARD DISC DRIVE
HFS	HIGH FREQUENCY SECTION (RF)
HOL	CASSETTE HOLDER
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
IMG	IMAGE DISPLAY UNIT
INC	INTERNAL CONNECTOR
INP	SIGNAL INPUT SECTION
KBD	KEYBOARD (SEPARATE)
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
MEM	MEMORY CIRCUIT
MIC	MICROPHONE SECTION
OUT	SIGNAL OUTPUT SECTION
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRG	PROGRAMMING SECTION
PRI	PRINT BLOCK
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PUD	PICK-UP DEVICE
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFM	RIBBON FEED MECHANISM

RFU	BOOSTER/RF UNIT
RHD	ROTARY HEAD(S)
SFT	SOFTWARE (TAPE, DISC, ETC.)
SHD	STATIONARY HEAD(S)
SLD	SLED MECHANISM
SNS	SENSOR UNIT
SPK	SPEAKER
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TIM	TIMER SECTION
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

DEFECT CODES

MECHANICAL		ELECTRICAL	
A	WORN OUT	N	EXHAUSTED, LOW EMISSION
B	DIRTY, CLOGGED	O	BURNT, ARCING, MISSING PIXELS
C	MISALIGNED	P	MISALIGNED
D	CUT, BROKEN	Q	SHORT
E	DEFORMED	R	OPEN
F	SNAPPED	S	LEAKING
G	SCRATCHED	T	BAD CONTACT, CONNECTION
H	CRACKED, PEELED, CORRODED	U	OPEN PATTERN
I	LOOSE	V	CRACKED PCB
J	SHAKY, UNSTABLE	W	COLD OR NO SOLDERING
K	LEAKING	X	BRIDGED SOLDERING
L	DRY (NO LUBRICANT)	Y	WRONG COMPONENT
M	FOREIGN OBJECT	Z	MISSING COMPONENT
		1	SOFTWARE BUG

REPAIR CODES

A	REPLACEMENT	N	MAINTENANCE
B	MECHANICAL ALIGNMENT	O	REFURBISHING
C	ELECTRICAL ALIGNMENT	P	PREVENTIVE PARTS REPLACEMENT
D	RESOLDERING	Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
E	CLEANING	U	EXPLANATION FOR CUSTOMER
F	LUBRICATION	V	ESTIMATION REFUSED
G	REPAIRED ELECTRICAL PARTS	W	ESTIMATION WITH PARTS
H	REPAIRED MECHANICAL PARTS	X	ESTIMATION WITHOUT PARTS
I	S/B MODIFICATION		
J	REMOVED COMPONENT (S)		
K	ADDED COMPONENTS	Y	RETURN WITHOUT REPAIR
L	FUNCTIONAL CHECK	Z	SET EXCHANGE
M	SPECIFICATION MEASUREMENT		

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

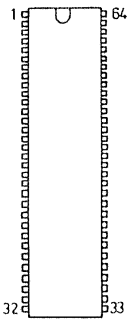
EXAMPLE OF USE :

FLAG	SYMPTOM CODE	PART NO	REF. NO	SECTION/PCB	DEFECT CODE	REPAIR CODE	QTY
1	1412	1111111111	R123.	YA22.	R	A	1
.	3641	3456789XX	111..	TDM..	C	B	0

LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS- ABKÜRZUNGEN LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **+USYS:** System voltage
- **+U_VIDEO:** Video drive voltage for the CRT board
- **+ STDBY_ ON:** Standby data (0V standby , 0.6v switched ON)
- **+5V DST:** 5v unregulated voltage from the DST to supply the tuner and audio MSP device
- **+5V ON:** 5v regulated voltage from the DST to supply the tuner and audio MSP device
- **+5V UP :** Microprocessor supply voltage
- **BCL:** Beam current limiting information
- **CVBS:** Composite video / luminance signal
- **CVBS_OUT:** Composite video output
- **CVBS_TXT:** Composite video for teletext extraction
- **DEGAUSS:** Degauss signal
- **EW :** East / West
- **FORMAT / BC:** Full white control DATA depending on 16/9 selected format
- **HDRV:** Horizontal deflection signal
- **HTR1 / HTR2:** Heater voltage from the DST to CRT PCB
- **LFB:** L ine Fast Blanking
- **MUTE :** Mutes audio amplifiers
- **PO:** “Power ON “ IP95 : reset activated and output = 8v “PO” = 5v when TV is working in normally
- **POWER_FAIL:** Detection of mains supply and deflection stage failures
- **RESET:** Microprocessor reset signal
- **SAFETY:** Safety information from the deflection stage
- **SCL:** Serial Clock
- **SDA :** Serial Data
- **SIF:** Sound IF
- **TRAP_INFO:** 31.4Mhz IF trap activation
- **U_ STANDBY:** Standby voltage
- **U_DRIVER:** Horizontal sync signal from TDA8855H
- **U_TIMER:** 11v voltage used during “Switch ON “ phase and “Wake Up“ mode
- **V FLB:** Vertical flyback reference for the microprocessor
- **V GUARD:** Safety data generated by the vertical amplifier TDA 8351
- **V_RETRACE:** 42 / 48volts (depending on tube type) generated by the DST and used for vertical blanking
- **V_SUPPLY:** 13.5 to 15.5 volts (depending on tube type) generated by the DST

INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE -
CIRCUITS INTEGRES ET TRANSISTORS
INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN -
CIRCUITI INTEGRATI TRANSISTOR
CIRCUITOS INTEGRADOS Y TRANSISTORES



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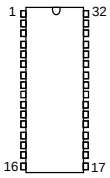

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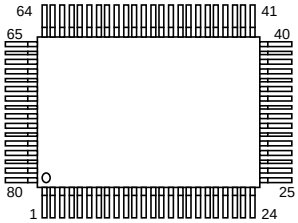

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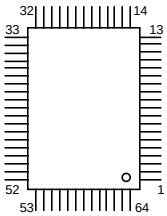

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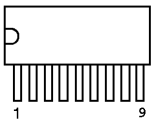

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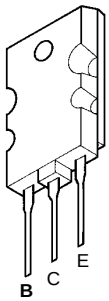

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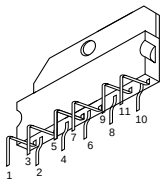

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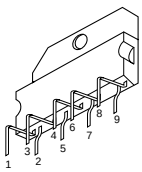

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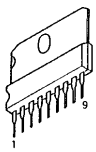

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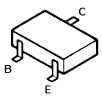

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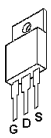
BCR191
DTC113ZK
DTC144EK
TN1401

ST24C08-M
TS3702CD



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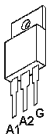

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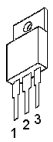

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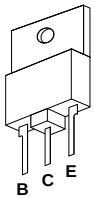


BD241C

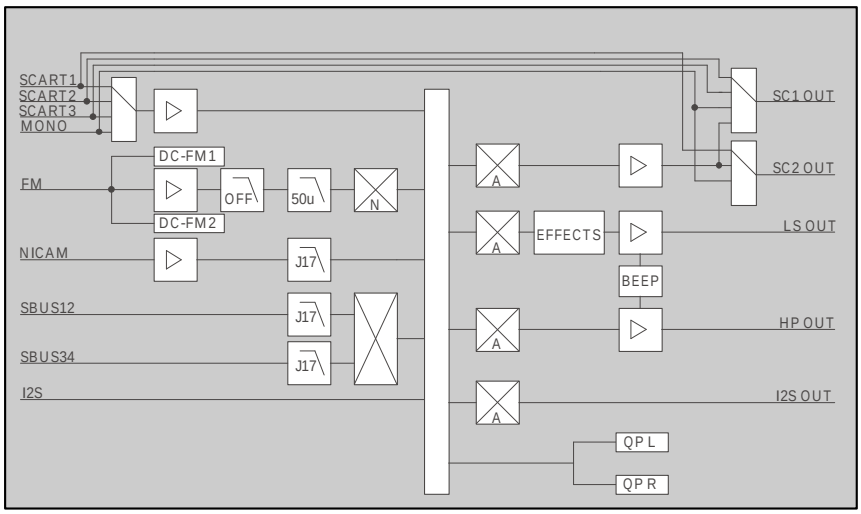
BC 337
BC 546B
BC 547B

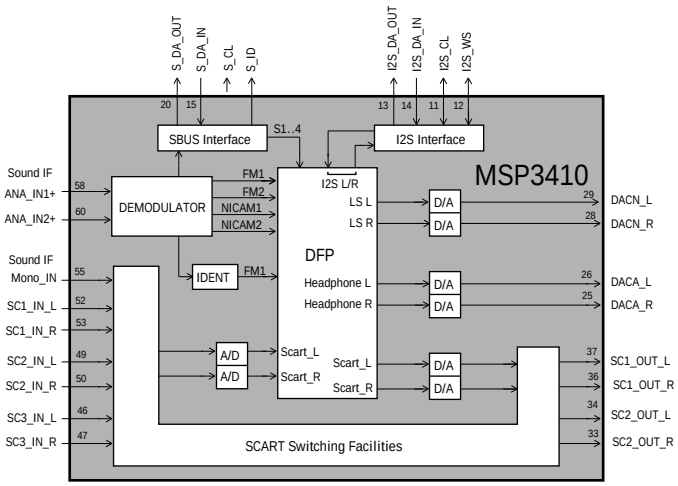
BF 422
BF423
2SA1020Y
2SC2236Y

MPS750

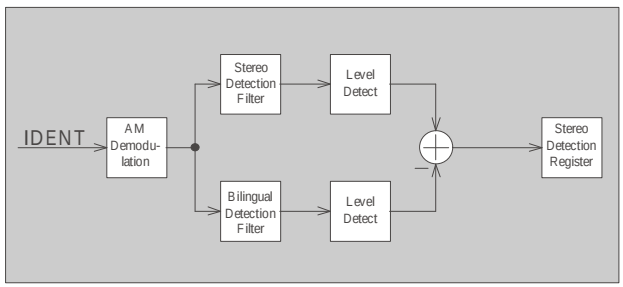
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

Audio baseband processing of the MSP3410

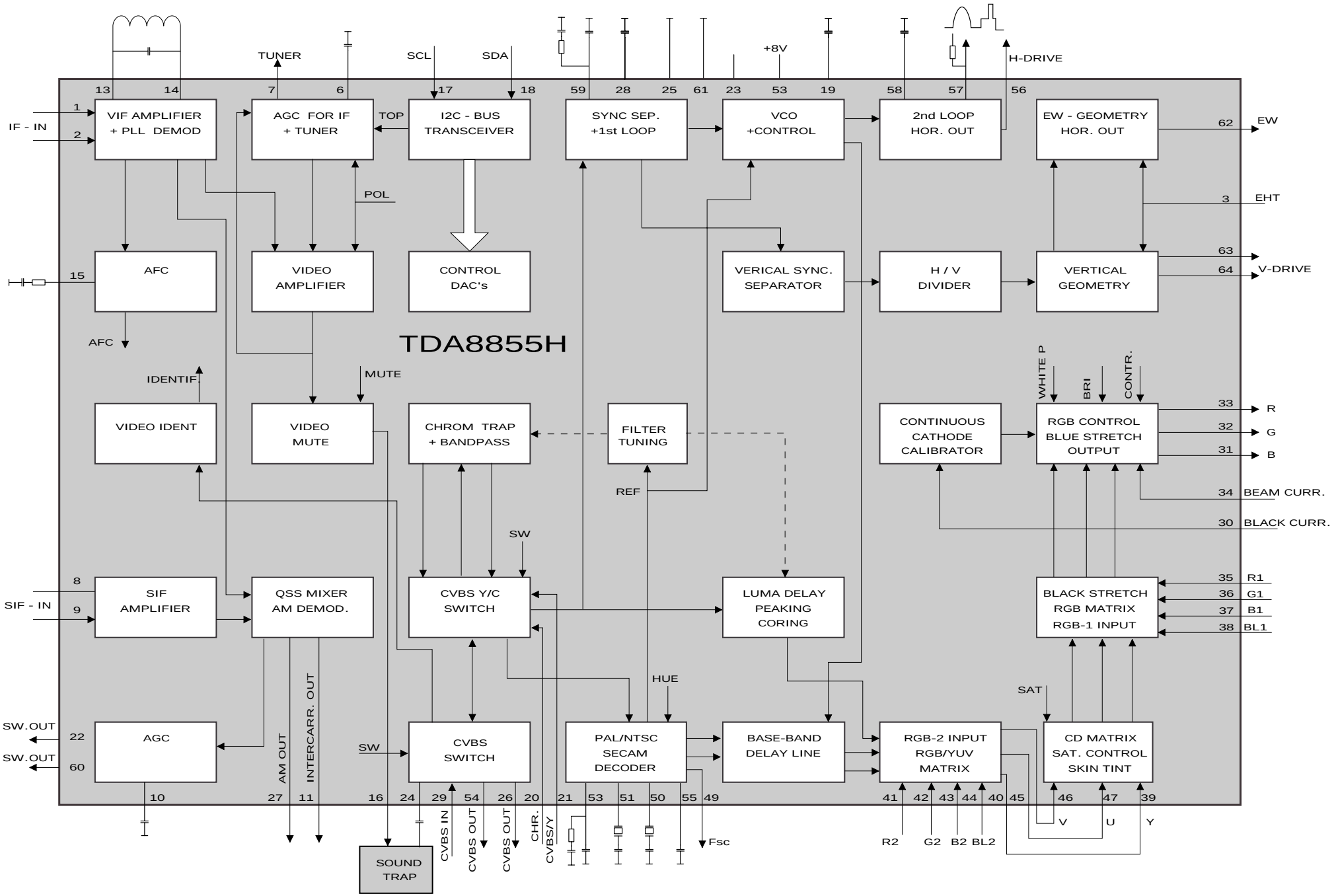




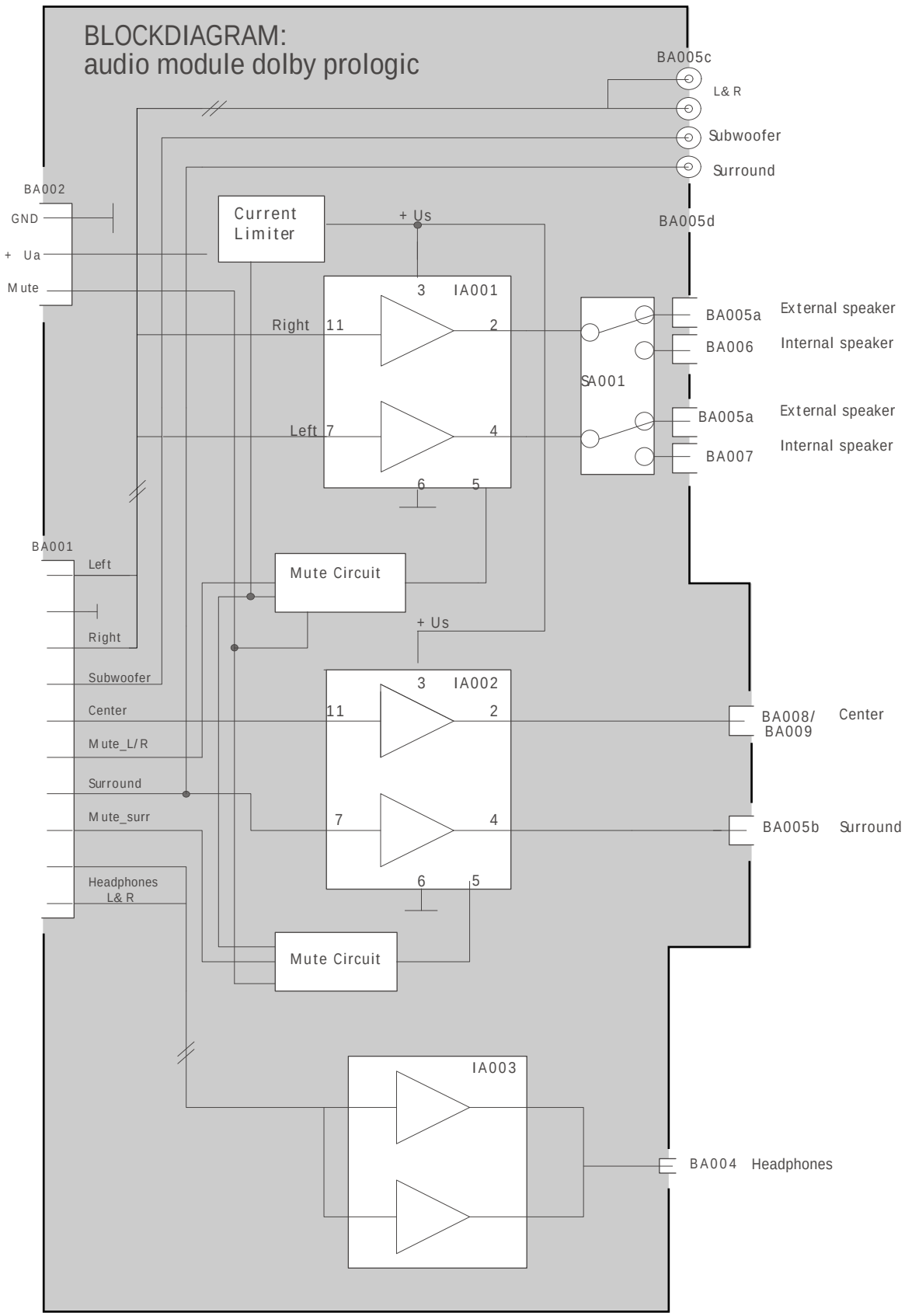
Detection part of the MSP 3410



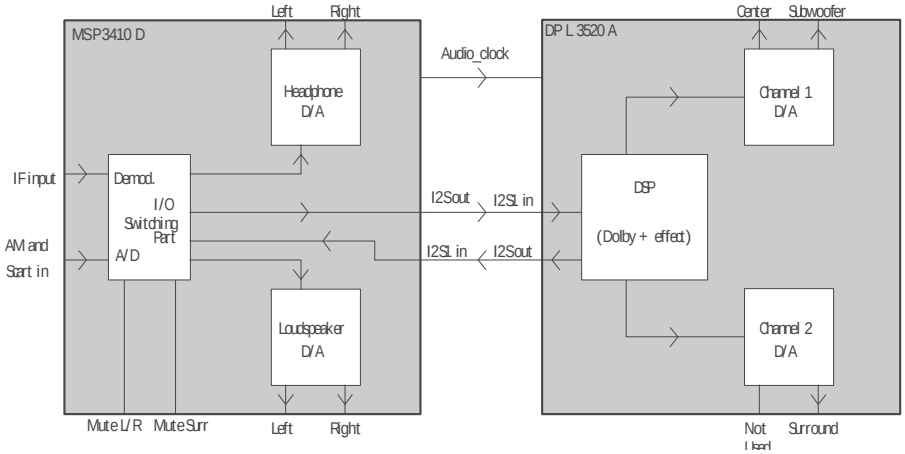
IV01 TDA 8855H



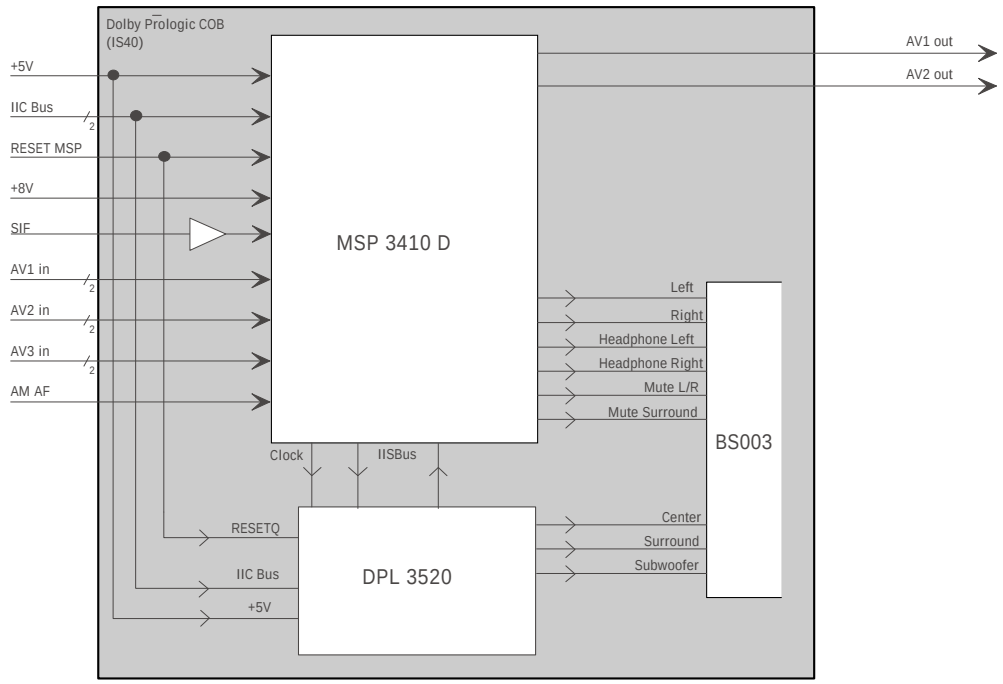
BLOCK DIAGRAM (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA SYNOPTIQUE (AUDIO MODULE DOLBY PROLOGIC)
BLOCKSCHALTBILD (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA A BLOCCI (AUDIO MODULE DOLBY PROLOGIC)
ESQUEMA DE BLOQUES (AUDIO MODULE DOLBY PROLOGIC)



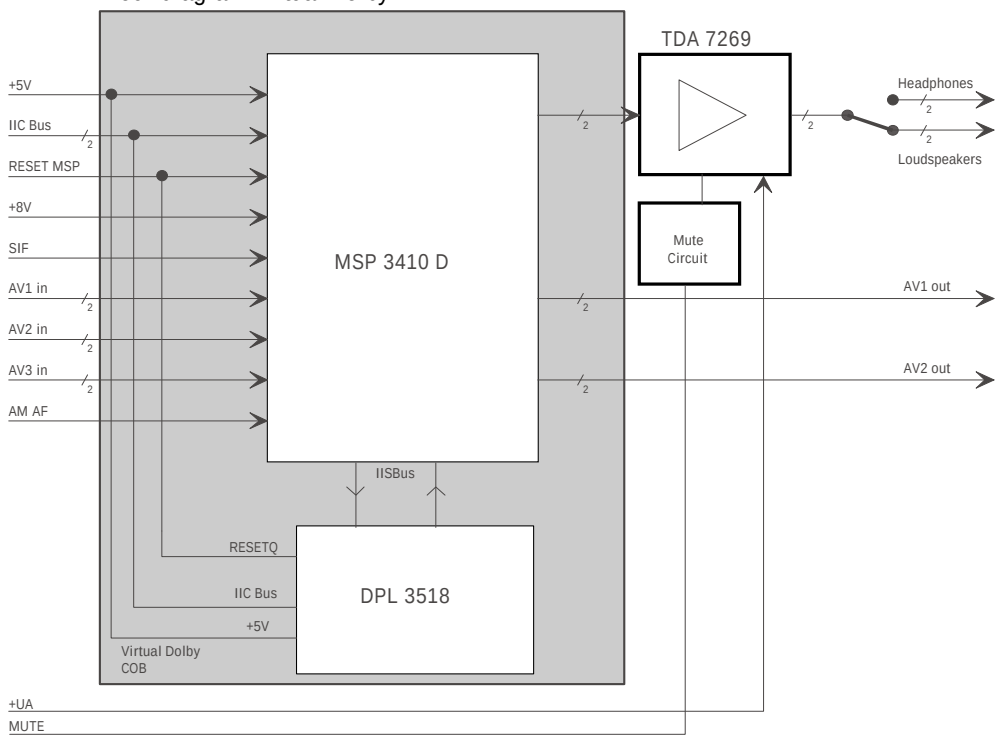
Interface requirement audio part with Dolby Prologic



Block diagram Dolby Prologic



Block diagram Virtual Dolby



IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE

IRIS

CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATION(S)/SOFTWARE/ MODE
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
X	NO SYMPTOM OR PROBLEM FOUND

(*1)
CAUTION
THE 'X' EXTENDED SYMPTO CODES (*-**X) SHOUL ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE	5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
1	GENERAL	**110**	**POWER PROBLEM** 111 NO POWER ON AC 112 NO POWER WHEN USING AC-ADAPTER 113 NO POWER WHEN USING DRY BATTERIES 114 NO POWER WHEN USING RECHARGEABLE BATTERIES 115 NO POWER FROM SOLAR CELL 116 NO POWER WHEN USING A CAR BATTERY 117 SHORT OPERATION TIME/SHORT BATTERY LIFE 118 POWER-OFF FUNCTION NOT WORKING 119 NO SWITCH-ON FROM STANDBY 11A POWERS UP, BUT NO OPERATION 11B CYCLIC POWER ON/OFF 11X OTHER POWER PROBLEM	**120**	**CHARGING PROBLEM** 121 NO BATTERY CHARGING 122 INCOMPLETE BATTERY CHARGE 12X OTHER CHARGING PROBLEM	**130**	**DISPLAY FUNCTION PROBLEM** 131 FAULTY TIMER/COUNTER DISPLAY 132 FAULTY LAMP/LED OPERATION 133 FAULTY LEVEL METER OPERATION 134 FAULTY ON-SCREEN DISPLAY OPERATION 135 ELECTRONIC TUNING DISPLAY FAULT 136 MECHANICAL TUNING DISPLAY FAULT 137 FAULTY TIME CODE DISPLAY 138 FAULTY ALARM/ERROR DISPLAY 139 DISPLAY DIM 13X OTHER DISPLAY FUNCTION PROBLEM	**140**	**ABNORMAL NOISE** 141 CRT DISCHARGING NOISE 142 EHT DISCHARGING NOISE 143 NOISY CABINET 144 NOISY TRANSFORMER 145 NOISY COMPONENT(S) 146 RATTLE 14X OTHER ABNORMAL NOISE	**150**	**REMOTE CONTROL PROBLEM** 151 NO REMOTE CONTROL OPERATION 152 INCORRECT REMOTE CONTROL OPERATION 153 REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM 154 POOR REMOTE CONTROL SENSITIVITY 15X OTHER REMOTE CONTROL PROBLEM	**160**	**PHYSICAL DAMAGE** 161 DAMAGED CABINET 162 DAMAGED HANDLE 163 DAMAGED CONTROL KNOB(S)/BUTTON(S) 164 DAMAGED DOOR/COVER 165 DAMAGED SEAL 166 DAMAGED PLUG OR SOCKET 167 DAMAGED LENS 168 DAMAGED CARTRIDGE OR STYLUS 169 DAMAGED ANTENNA 16A DAMAGED CRT OR VIEWFINDER 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS 16C PRINTED MARKINGS ERASED/PEELED OFF 16X OTHER PHYSICAL DAMAGE	**170**	**GENERAL FUNCTION PROBLEM** 171 FAULTY CLOCK FUNCTION 172 FAULTY SLEEP FUNCTION 173 FAULTY TIMER PROGRAMMING 174 FAULTY TIMER RECORDING 175 SOFTWARE PROGRAMMING PROBLEM 176 FAULTY RECORD MUTE OPERATION 177 FAULTY PROGRAMMED PLAYBACK OPERATION 178 FAULTY MEMORY FUNCTION 17X OTHER GENERAL FUNCTION PROBLEM	**180**	**SPECIAL REQUIREMENTS** 181 TEST AND CHECK 182 GENERAL OVERHAUL 183 SYSTEM/FREQUENCY CONVERSION 184 INITIAL SETUP REQUESTED 185 MODIFICATION/CIRCUIT CHANGE 186 WRONG SET IN CARTON 18X OTHER SPECIAL REQUIREMENTS 18Z SYMPTOM NOT AVAILABLE
2	COMMUNICATION	**210**	**NO RECEPTION** 211 NO AM RECEPTION 212 NO FM RECEPTION 213 NO SW RECEPTION 214 NO VHF RECEPTION 215 NO UHF RECEPTION 216 NO BS RECEPTION 217 NO CS RECEPTION 218 NO HDTV RECEPTION 219 NO QPS RECEPTION 21X OTHER 'NO RECEPTION' PROBLEM	**220**	**POOR RECEPTION** 221 POOR AM RECEPTION 222 POOR FM RECEPTION 223 POOR SW RECEPTION 224 POOR VHF RECEPTION 225 POOR UHF RECEPTION 226 POOR BS RECEPTION 227 POOR CS RECEPTION 228 POOR HDTV RECEPTION 229 POOR QPS RECEPTION 22X OTHER 'POOR RECEPTION' PROBLEM	**230**	**TRANSMISSION PROBLEM** 231 NO TRANSMISSION 232 POOR TRANSMISSION 233 TRANSMISSION LEVEL TOO HIGH 234 NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET 235 POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET 23X OTHER TRANSMISSION PROBLEM	**240**	**NOISY RECEPTION/ TRANSMISSION** 241 LINE NOISE 242 OSCILLATION 243 INTERSTATION INTERFERENCE 24X OTHER NOISE RECEPTION/TRANSMISSION PROBLEM	**250**	**UNSTABLE RECEPTION/ TRANSMISSION** 251 TUNING DRIFT 252 FADING 25X OTHER UNSTABLE RECEPTION/ TRANSMISSION PROBLEM	**260**	**TUNING PROBLEM** 261 MANUAL TUNING PROBLEM 262 AUTOMATIC TUNING PROBLEM 263 INCORRECT TUNING 264 TUNING MEMORY PROBLEM 26X OTHER TUNING PROBLEM	**270**	**SPECIAL COMMUNICATION PROBLEM** 271 FAULTY DIALLING 272 FAULTY CHANNEL SELECTION 273 FAULTY AUTO-ANSWER OPERATION 274 FAULTY MESSAGE READ-OUT FUNCTION 275 FAULTY AUTODIAL MEMORY 276 FAULTY SPEECH PROCESSING 277 NO RINGING TONE 278 WEAK RINGING TONE 27X OTHER SPECIAL COMMUNICATION PROBLEM	**280**	**SPECIAL RECEPTION PROBLEM** 281 FAULTY STEREO RECEPTION 282 FAULTY MAIN CHANNEL (A) FUNCTION 283 FAULTY SUB-CHANNEL (B) FUNCTION 284 FAULTY SSB RECEPTION 285 FAULTY RDS/VPS OPERATION 286 FAULTY TELETEXT RECEPTION 287 FAULTY SATELLITE/RTTY RECEPTION 288 FAULTY FAX OPERATION 28X OTHER SPECIAL RECEPTION PROBLEM
3	PICTURE	**310**	**NO PICTURE** 311 NO PICTURE IN E TO E MODE 312 NO PICTURE IN PLAYBACK MODE 313 NO PICTURE IN VIEWFINDER 314 NO PICTURE, ONLY RASTER 315 NO RASTER, BLACK PICTURE 316 ONLY HORIZONTAL LINE 317 ONLY VERTICAL LINE 31X OTHER 'NO PICTURE' PROBLEM	**320**	**PICTURE LEVEL PROBLEM** 321 PICTURE TOO DARK 322 PICTURE TOO BRIGHT 323 CONTRAST TOO LOW 324 CONTRAST TOO HIGH 325 SATURATED WHITE OR BLACK LEVEL 326 SHADING ON PICTURE 327 ONLY PARTIAL PICTURE 32X OTHER PICTURE LEVEL PROBLEM	**330**	**PICTURE QUALITY PROBLEM** 331 POOR PICTURE RESOLUTION 332 POOR FOCUS 333 RINGING ON PICTURE 334 EXCESSIVE SMEAR/LAG 335 POOR LINEARITY OR GEOMETRY 336 PICTURE SIZE INCORRECT 337 INCORRECT CENTRING OF PICTURE 338 PICTURE SLANTED 339 V-SIZE INCORRECT 33A H-SIZE INCORRECT 33X OTHER PICTURE QUALITY PROBLEM	**340**	**PICTURE NOISE** 341 SNOWY PICTURE 342 DOT NOISE OR DROPOUT ON PICTURE 343 NOISE BARS ON PICTURE 344 BLANKING LINES ON PICTURE 345 BEATING O PICTURE 346 GHOSTING ON PICTURE 347 VCR HEAD SWITCHING NOISE ON PICTURE 348 OVERMODULATION NOISE 34X OTHER PICTURE NOISE PROBLEM	**350**	**UNSTABLE PICTURE** 351 SYNC PROBLEM 352 PICTURE PUMPING 353 PICTURE JITTER 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL) 355 FLICKERING PICTURE 356 FLASHING PICTURE 357 CYCLIC PICTURE MUTING 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE 359 VCR SKEW ERROR 35A FROZEN PICTURE 35B JUMPING/REPEATING PICTURE 35X OTHER 'UNSTABLE PICTURE' PROBLEM	**360**	**POOR PICTURE RECORDING** 361 NO PICTURE RECORDING 362 NO ERASURE PROTECTION FOR VIDEO 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED 364 UNWANTED ERASURE OF PICTURE 365 NO CAMERA RECORDING 366 ONLY ONE FIELD PER FRAME BEING RECORDED 36X OTHER PICTURE RECORDING PROBLEM	**370**	**SPECIAL PICTURE FUNCTION PROBLEM** 371 EDITING PROBLEM 372 FAULTY FADING/WIPER OPERATION 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION 374 FAULTY SUPERIMPOSE/TELOP OPERATION 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION 376 FAULTY PICTURE TRANSMISSION 377 FAULTY DIGITAL SHUTTER FUNCTION 378 FAULTY GENLOCK FUNCTION 379 FAULTY FLASH/STROBE FUNCTION 37A FAULTY DIGITAL PICTURE FUNCTION 37B FAULTY AUTO-EDIT FUNCTION 37X OTHER SPECIAL PICTURE FUNCTION PROBLEM	**380**	**PICTURE DISPLAY/PICKUP PROBLEM** 381 BURN MARK ON DISPLAY/PICKUP 382 SCRATCH ON DISPLAY/PICKUP 383 DUST/DIRT ON DISPLAY/PICKUP 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL 38X OTHER PICTURE DISPLAY/PICKUP PROBLEM
4	COLOUR	**410**	**NO COLOUR** 411 NO COLOUR IN E TO E MODE 412 NO COLOUR IN PLAYBACK MODE 413 NO COLOUR IN VIEWFINDER 414 NO COLOUR IN PART OF PICTURE 41X OTHER 'NO COLOUR' PROBLEM	**420**	**COLOUR LEVEL PROBLEM** 421 WEAK COLOUR 422 EXCESSIVE COLOUR 42X OTHER COLOUR LEVEL PROBLEM	**430**	**POOR COLOUR QUALITY** 431 SOME OR ALL COLOURS MISSING 432 POOR WHITE BALANCE 433 HUE PROBLEM 434 PURITY ERROR 435 LANDING ERROR 436 CONVERGENCE ERROR 437 REGISTRATION ERROR 438 PITCH MOIR... 43X OTHER COLOUR QUALITY PROBLEM	**440**	**NOISY COLOUR** 441 COLOUR NOISE ON A BLACK & WHITE PICTURE 442 COLOUR STREAKING 44X OTHER COLOUR NOISE PROBLEM	**450**	**UNSTABLE COLOUR** 451 COLOUR FLASHING 452 HUE CONSTANTLY CHANGING 453 FLICKERING COLOUR 454 COLOUR NOT LOCKED 45X OTHER UNSTABLE COLOUR PROBLEM	**460**	**POOR COLOUR RECORDING** 461 NO COLOUR RECORDING 46X OTHER COLOUR RECORDING PROBLEM	**470**	**SPECIAL COLOUR FUNCTION PROBLEM** 471 FAULTY AUTOMATIC WHITE BALANCE 472 FAULTY COLOUR EFFECTS FUNCTION 47X OTHER SPECIAL COLOUR FUNCTION PROBLEM	**480**	
5	AUDIO	**510**	**NO AUDIO** 511 NO SOUND IN E TO E MODE 512 NO PLAYBACK OF OUTGOING MESSAGE(S) 513 NO PLAYBACK OF INCOMING MESSAGE(S) 51X OTHER 'NO AUDIO' PROBLEM	**520**	**AUDIO LEVEL PROBLEM** 521 LOW AUDIO LEVEL 522 EXCESSIVE AUDIO LEVEL 523 BALANCE PROBLEM 524 FADER PROBLEM 525 AUDIO LEVEL REMAINING 52X OTHER AUDIO LEVEL PROBLEM	**530**	**AUDIO QUALITY** 531 POOR FREQUENCY RESPONSE 532 DISTORTED AUDIO 533 NO OR POOR TREBLE 534 NO OR POOR BASS 53X OTHER AUDIO QUALITY PROBLEM	**540**	**NOISY AUDIO** 541 HUM 542 HISS 543 CROSSTALK 544 STATIC, POP OR CLICK NOISE 545 BUZZ 546 SCRATCHING NOISE 547 IGNITION NOISE 548 MULTIPATH NOISE 54X OTHER AUDIO NOISE PROBLEM	**550**	**UNSTABLE AUDIO** 551 JUMPING OR REPEATING AUDIO 552 AUDIO PUMPING OR BREATHING 553 AUDIO DROPOUTS 554 CYCLIC AUDIO MUTING 555 WOW AND FLUTTER 556 HOWLING/ACOUSTIC FEEDBACK 55X OTHER UNSTABLE AUDIO PROBLEM	**560**	**POOR AUDIO RECORDING** 561 AUDIO NOT BEING RECORDED 562 NO ERASURE PROTECTION FOR AUDIO 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED 564 UNWANTED ERASURE OF AUDIO 565 MESSAGE NOT BEING RECORDED 56X OTHER AUDIO RECORDING PROBLEM	**570**	**POOR SPECIAL AUDIO FUNCTION** 571 FAULTY FADE OPERATION 572 FAULTY ECHO OPERATION 573 FAULTY MIXING OPERATION 574 FAULTY REPEAT MODE OPERATION 575 FAULTY AUDIO PROCESSING 576 FAULTY SYNC RECORDING OPERATION 577 FAULTY DBB/DOL OPERATION 578 FAULTY NOISE REDUCTION OPERATION 57X OTHER SPECIAL AUDIO FUNCTION PROBLEM	**580**	**STEREO/MULTI MODE OPERATION PROBLEM** 581 NO STEREO OPERATION 582 POOR CHANNEL SEPARATION 583 DIFFERENCE IN PHASE BETWEEN CHANNELS 584 PROBLEM WITH SURROUND SOUND MODE 585 PROBLEM WITH PCM AUDIO MODE 58X OTHER STEREO/MULTI MODE PROBLEM
6	MECHANISM	**610**	**NO MECHANICAL OPERATION** 611 NO DISC ROTATION 612 NO FORWARD OPERATION 613 NO REVERSE OPERATION 614 NO FAST FORWARD OR REWIND FUNCTION 615 NO LOADING 616 NO UNLOADING OR EJECTING OF TAPE 617 NO AUTO SHUT-OFF OPERATION 618 TONEARM DOES NOT MOVE 619 DISC NOT BEING EJECTED 61A MAGAZINE DOES NOT EJECT 61X OTHER 'NO MECHANICAL OPERATION' PROBLEM	**620**	**IRREGULAR MECHANICAL OPERATION** 621 IRREGULAR ROTATION 622 IRREGULAR FORWARD MODE 623 IRREGULAR REVERSE OPERATION 624 IRREGULAR FAST FORWARD OR REWIND FUNCTION 625 IRREGULAR LOADING 626 IRREGULAR UNLOADING OR EJECTING OF TAPE 627 IRREGULAR AUTO SHUT-OFF OPERATION 628 IRREGULAR TONEARM MOVEMENT 629 IRREGULAR EJECTION OF DISC 62A IRREGULAR DIRECTION CHANGE 62X OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM	**630**	**SPEED PROBLEM** 631 SPEED TOO FAST 632 SPEED TOO SLOW 63X OTHER SPEED PROBLEM	**640**	**MECHANICAL NOISE** 641 ROTATION NOISE 642 MOTOR NOISE 643 WIND NOISE 644 TAPE SQUEALING 645 FAN NOISE 646 DISC SCRAPING 647 NOISY TAPE LOADING 64X OTHER MECHANICAL NOISE PROBLEM	**650**		**660**	**DAMAGE TO SOFTWARE** 661 TAPE GETS SCRATCHED 662 DISC GETS SCRATCHED 663 TAPE GETS CHEWED/WRINKLED 664 TAPE JAMMED OR BROKEN 665 TAPE GETS CURLED 666 SLACK TAPE 667 TAPE STICKING 66X OTHER SOFTWARE DAMAGE PROBLEM	**670**	**MECHANICAL OPERATION PROBLEM** 671 FAULTY START/STOP OPERATION 672 FAULTY PAUSE OPERATION 673 FAULTY AUTOMATIC PROGRAM SEARCH 674 FAULTY CUE/REVIEW MODE 675 FAULTY SLOW MOTION OPERATION 676 FAULTY HIGH-SPEED SCANNING MODE 677 FAULTY SPEED COPY FUNCTION 678 FAULTY REPEAT OPERATION 679 FAULTY RECORD REVIEW MODE 67A FAULTY AMS OPERATION 67X OTHER MECHANICAL OPERATION PROBLEM	**680**	**LENS PROBLEM** 681 FOCUS PROBLEM 682 ZOOM PROBLEM 683 IRIS PROBLEM 684 MACRO PROBLEM 68X OTHER LENS PROBLEM
7	DATA PROCESSING	**710**	**NO DATA PROCESSING** 711 NO INITIAL SCREEN 712 SYSTEM DOES NOT RESET 713 SYSTEM DOES NOT BOOT UP 714 NO OPERATION FROM PLUG-IN MODULE 715 NO KEYBOARD OPERATION 716 NO OPERATION FROM OTHER INPUT/OUTPUT 717 NO DATA STORAGE OPERATION 718 NO DATA COMMUNICATION 71X OTHER 'NO DATA PROCESSING' PROBLEM	**720**	**FAULTY DATA PROCESSING OPERATION** 721 INCORRECT DATA 722 SYSTEM RESET WHILE BEING USED 723 SYSTEM LOCKS OUT/CRASHES 724 FAULTY OPERATION OF PLUG-IN MODULE 725 FAULTY KEYBOARD OPERATION 726 FAULTY OPERATION OF OTHER INPUT/OUTPUT 727 FAULTY DATA STORAGE OPERATION 728 FAULTY DATA COMMUNICATION 72X OTHER 'FAULTY DATA PROCESSING' PROBLEM	**730**	**DATA DISPLAY PROBLEM** 731 INCORRECT CHARACTER DISPLAY 732 MISSING DISPLAY CHARACTERS 733 FAULTY GRAPHIC DISPLAY 734 FAULTY SWITCHING BETWEEN GRAPHIC/ CHARACTER MODE 735 FAULTY PROMPT/CURSOR OPERATION 736 DATA DISPLAY COLOUR INCORRECT 737 NO PAGING OR SCROLL MODE 73X OTHER DATA DISPLAY PROBLEM	**740**		**750**		**760**	**DATA READ/WRITE PROBLEM** 761 FORMATTING PROBLEM 762 DATA ON STORAGE MEDIUM BEING LOST 763 FRAME MEMORY PROBLEM 76X OTHER DATA READ/WRITE PROBLEM	**770**	**SPECIAL DATA PROCESSING** 771 FAULTY SELF-DIAGNOSTIC MODE 772 FAULTY WORD PROCESSING FUNCTION 773 FAULTY GRAPHIC EDIT FUNCTION 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM	**780**	
8	PRINTING	**810**	**NO PRINTER OPERATION** 811 NOT PRINTING 812 NO COMMUNICATION WITH PRINTER 813 PAPER NOT LOADING 814 NO PAPER FEED 815 NO IMAGE FIXATION 81X OTHER NO PRINTER OPERATION PROBLEM	**820**	**ERRONEOUS PRINTER OPERATION** 821 PRINT IMAGE REVERSED (NEGATIVE/ POSITIVE) 822 IRREGULAR PAPER FEED 823 ERRONEOUS PRINT MODE SWITCHING 82X OTHER PRINTER OPERATION PROBLEM	**830**	**POOR PRINT QUALITY** 831 INCORRECT PRINTING POSITION 832 LOW PRINT CONTRAST 833 EXCESSIVE PRINT CONTRAST 834 BLURRED PRINT IMAGE 835 PRINT IMAGE NOT SHARP 836 DOTS MISSING-IN PRINT IMAGE 83X OTHER PRINT QUALITY PROBLEM	**840**	**NOISY PRINTING** 841 PRINTING NOISE LINES 842 DIRTY PRINTING 84X OTHER NOISY PRINTING PROBLEM	**850**	**UNSTABLE PRINTER OPERATION** 851 UNSTABLE PAPER LOADING 852 UNSTABLE MULTI-PAPER LOADING 853 INCORRECT LINE-UP OF CHARACTERS 85X OTHER UNSTABLE PRINTER OPERATION PROBLEM	**860**	**RIBBON/PAPER PROBLEMS** 861 RIBBON BROKEN 862 RIBBON STUCK/STICKING 863 RIBBON DERAILED 864 PAPER STUCK/STICKING TO MECHANISM 865 PAPER JAM 86X OTHER RIBBON/PAPER PROBLEM	**870**		**880**	**FAULTY FONT/CHARACTER FUNCTIONS** 881 INCORRECT CHARACTERS 882 INCORRECT CHARACTER SIZE 883 FONT LOADING PROBLEM 88X OTHER FAULTY FONT/CHARACTER FUNCTION PROBLEM

SECTION CODES

ANT	ANTENNA SECTION
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
APR	SIGNAL PROCESSING (ANALOG)
ARM	ARM MECHANISM
BCH	BATTERY CHARGE
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
CTR	CONTROL PANEL
DDM	DISC DRIVE MECHANISM
DFL	DEFLECTION CIRCUIT
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
EXC	EXTERNAL CONNECTOR
FDD	FLOPPY DISC DRIVE
FLX	FLEXIBLE PCB
FMW	FIRMWARE
FPK	FOCUS PACK
HCM	HEAD CARRIAGE MECHANISM

HDD	HARD DISC DRIVE
HFS	HIGH FREQUENCY SECTION (RF)
HOL	CASSETTE HOLDER
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
IMG	IMAGE DISPLAY UNIT
INC	INTERNAL CONNECTOR
INP	SIGNAL INPUT SECTION
KBD	KEYBOARD (SEPARATE)
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
MEM	MEMORY CIRCUIT
MIC	MICROPHONE SECTION
OUT	SIGNAL OUTPUT SECTION
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRG	PROGRAMMING SECTION
PRI	PRINT BLOCK
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PUD	PICK-UP DEVICE
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFM	RIBBON FEED MECHANISM

RFU	BOOSTER/RF UNIT
RHD	ROTARY HEAD(S)
SFT	SOFTWARE (TAPE, DISC, ETC.)
SHD	STATIONARY HEAD(S)
SLD	SLED MECHANISM
SNS	SENSOR UNIT
SPK	SPEAKER
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TIM	TIMER SECTION
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

DEFECT CODES

MECHANICAL		ELECTRICAL	
A	WORN OUT	N	EXHAUSTED, LOW EMISSION
B	DIRTY, CLOGGED	O	BURNT, ARCING, MISSING PIXELS
C	MISALIGNED	P	MISALIGNED
D	CUT, BROKEN	Q	SHORT
E	DEFORMED	R	OPEN
F	SNAPPED	S	LEAKING
G	SCRATCHED	T	BAD CONTACT, CONNECTION
H	CRACKED, PEELED, CORRODED	U	OPEN PATTERN
I	LOOSE	V	CRACKED PCB
J	SHAKY, UNSTABLE	W	COLD OR NO SOLDERING
K	LEAKING	X	BRIDGED SOLDERING
L	DRY (NO LUBRICANT)	Y	WRONG COMPONENT
M	FOREIGN OBJECT	Z	MISSING COMPONENT
		1	SOFTWARE BUG

REPAIR CODES

A	REPLACEMENT	N	MAINTENANCE
B	MECHANICAL ALIGNMENT	O	REFURBISHING
C	ELECTRICAL ALIGNMENT	P	PREVENTIVE PARTS REPLACEMENT
D	RESOLDERING	Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
E	CLEANING	U	EXPLANATION FOR CUSTOMER
F	LUBRICATION	V	ESTIMATION REFUSED
G	REPAIRED ELECTRICAL PARTS	W	ESTIMATION WITH PARTS
H	REPAIRED MECHANICAL PARTS	X	ESTIMATION WITHOUT PARTS
I	S/B MODIFICATION		
J	REMOVED COMPONENT (S)		
K	ADDED COMPONENTS	Y	RETURN WITHOUT REPAIR
L	FUNCTIONAL CHECK	Z	SET EXCHANGE
M	SPECIFICATION MEASUREMENT		

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

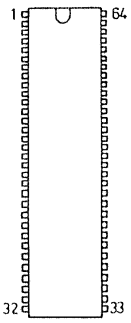
EXAMPLE OF USE :

FLAG	SYMPTOM CODE	PART NO	REF. NO	SECTION/PCB	DEFECT CODE	REPAIR CODE	QTY
1	1412	1111111111	R123.	YA22.	R	A	1
.	3641	3456789XX	111..	TDM..	C	B	0

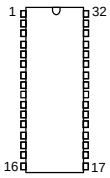
LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS- ABKÜRZUNGEN LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **+USYS:** System voltage
- **+U_VIDEO:** Video drive voltage for the CRT board
- **+ STDBY_ ON:** Standby data (0V standby , 0.6v switched ON)
- **+5V DST:** 5v unregulated voltage from the DST to supply the tuner and audio MSP device
- **+5V ON:** 5v regulated voltage from the DST to supply the tuner and audio MSP device
- **+5V UP :** Microprocessor supply voltage
- **BCL:** Beam current limiting information
- **CVBS:** Composite video / luminance signal
- **CVBS_OUT:** Composite video output
- **CVBS_TXT:** Composite video for teletext extraction
- **DEGAUSS:** Degauss signal
- **EW :** East / West
- **FORMAT / BC:** Full white control DATA depending on 16/9 selected format
- **HDRV:** Horizontal deflection signal
- **HTR1 / HTR2:** Heater voltage from the DST to CRT PCB
- **LFB:** L ine Fast Blanking
- **MUTE :** Mutes audio amplifiers
- **PO:** “Power ON “ IP95 : reset activated and output = 8v “PO” = 5v when TV is working in normally
- **POWER_FAIL:** Detection of mains supply and deflection stage failures
- **RESET:** Microprocessor reset signal
- **SAFETY:** Safety information from the deflection stage
- **SCL:** Serial Clock
- **SDA :** Serial Data
- **SIF:** Sound IF
- **TRAP_INFO:** 31.4Mhz IF trap activation
- **U_ STANDBY:** Standby voltage
- **U_DRIVER:** Horizontal sync signal from TDA8855H
- **U_TIMER:** 11v voltage used during “Switch ON “ phase and “Wake Up“ mode
- **V FLB:** Vertical flyback reference for the microprocessor
- **V GUARD:** Safety data generated by the vertical amplifier TDA 8351
- **V_RETRACE:** 42 / 48volts (depending on tube type) generated by the DST and used for vertical blanking
- **V_SUPPLY:** 13.5 to 15.5 volts (depending on tube type) generated by the DST

INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE -
CIRCUITS INTEGRES ET TRANSISTORS
INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN -
CIRCUITI INTEGRATI TRANSISTOR
CIRCUITOS INTEGRADOS Y TRANSISTORES



MPS3400C-PP-C6



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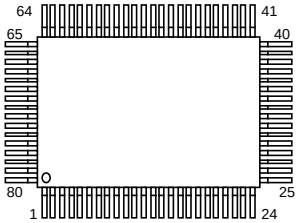
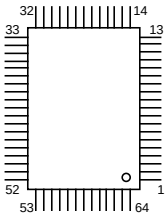


ST92R195



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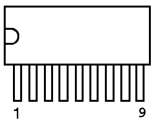

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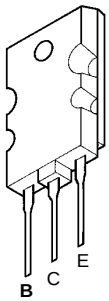

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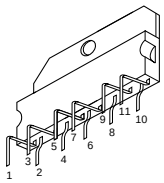

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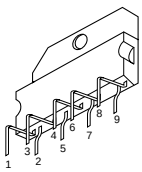

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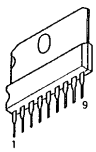

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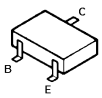

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BCR191
DTC113ZK
DTC144EK
TN1401

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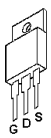
TS3702CD



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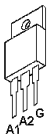

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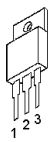

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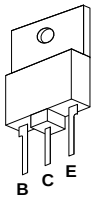


BD241C

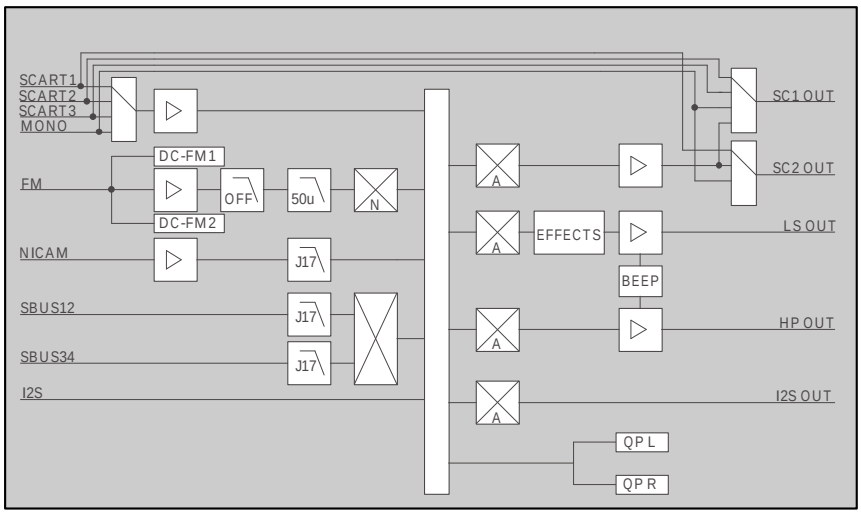
BC 337
BC 546B
BC 547B

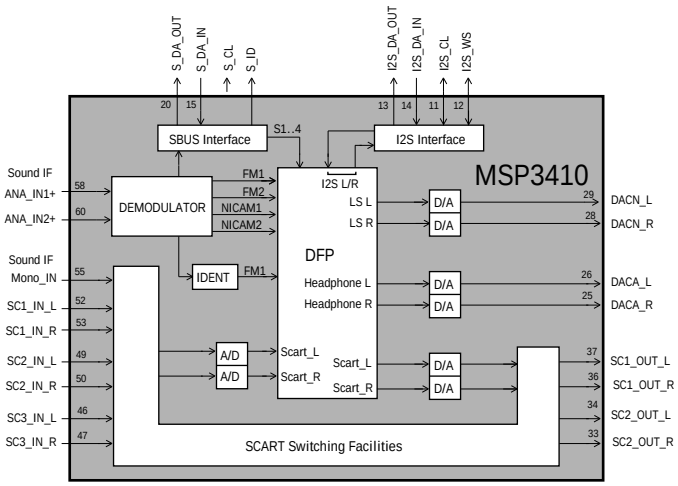
BF 422
BF423
2SA1020Y
2SC2236Y

MPS750

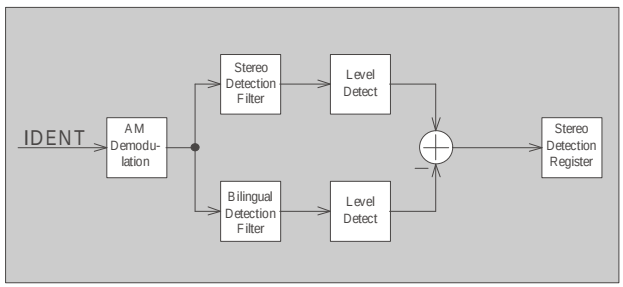
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

Audio baseband processing of the MSP3410

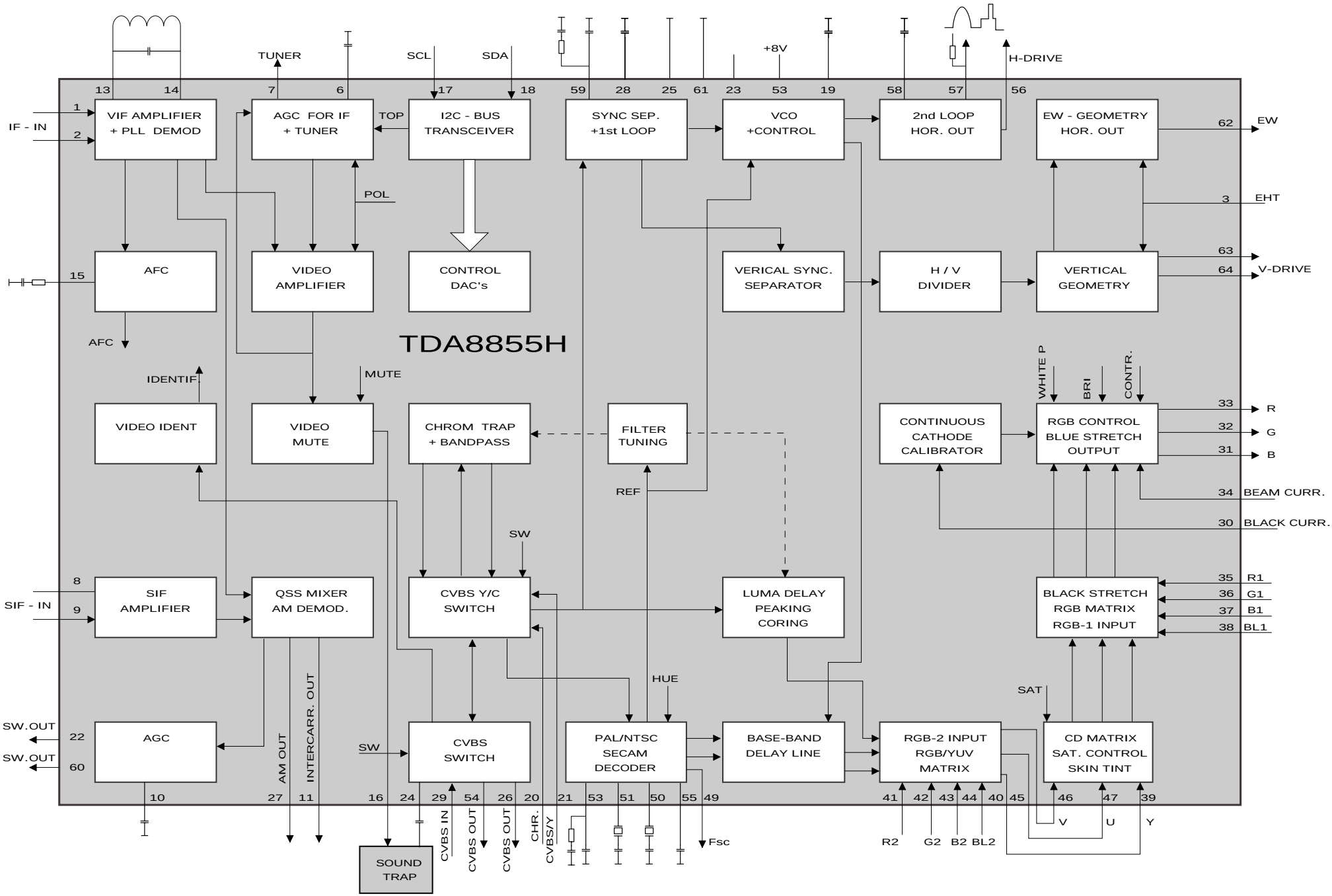




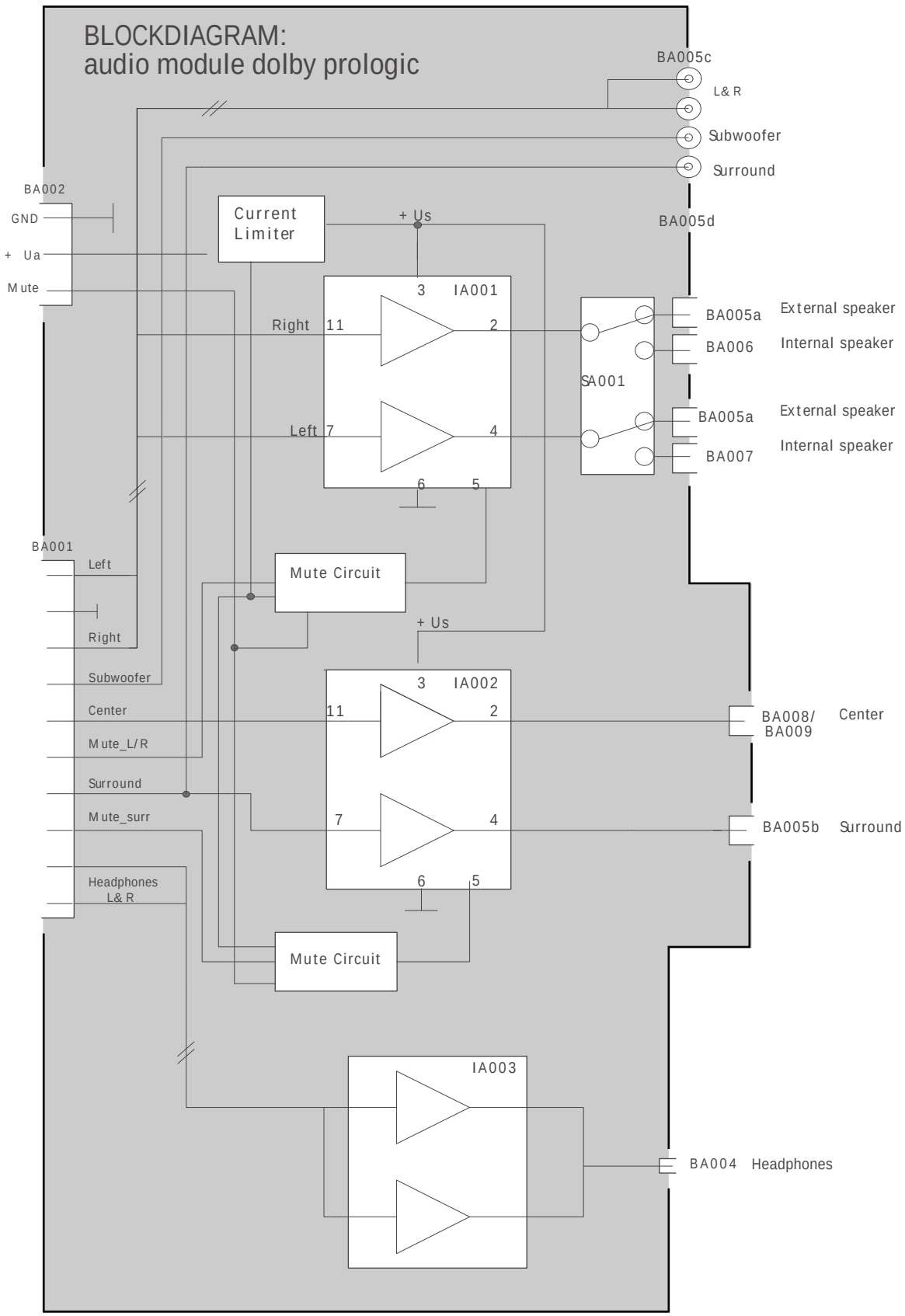
Detection part of the MSP 3410



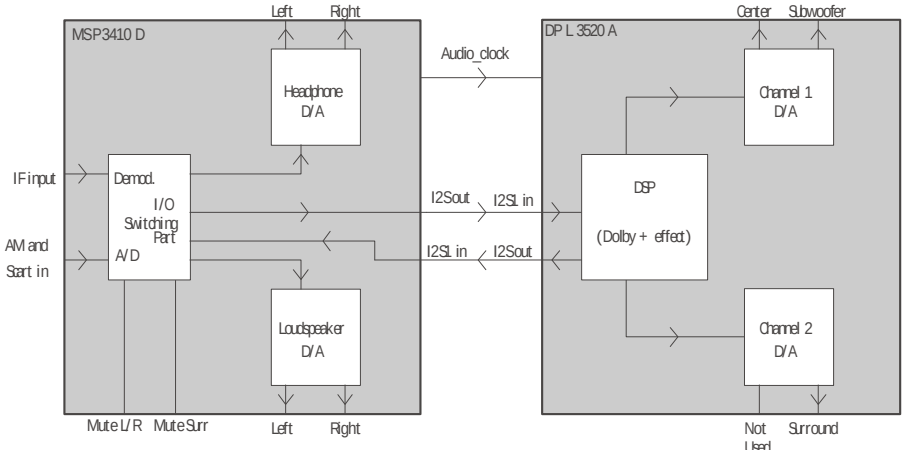
IV01 TDA 8855H



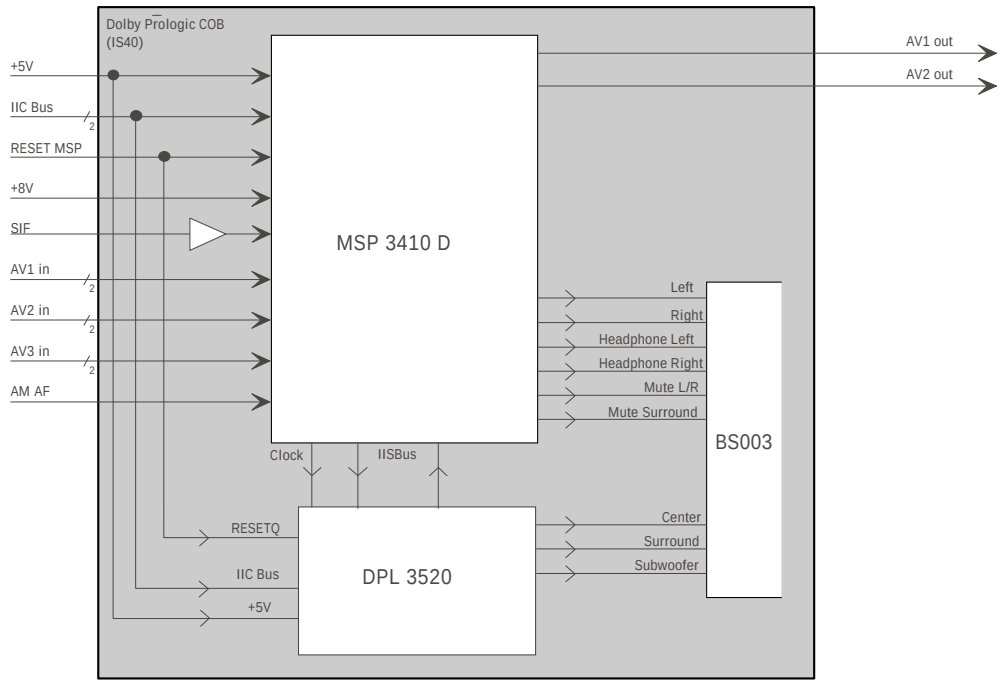
BLOCK DIAGRAM (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA SYNOPTIQUE (AUDIO MODULE DOLBY PROLOGIC)
BLOCKSCHALTBILD (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA A BLOCCI (AUDIO MODULE DOLBY PROLOGIC)
ESQUEMA DE BLOQUES (AUDIO MODULE DOLBY PROLOGIC)



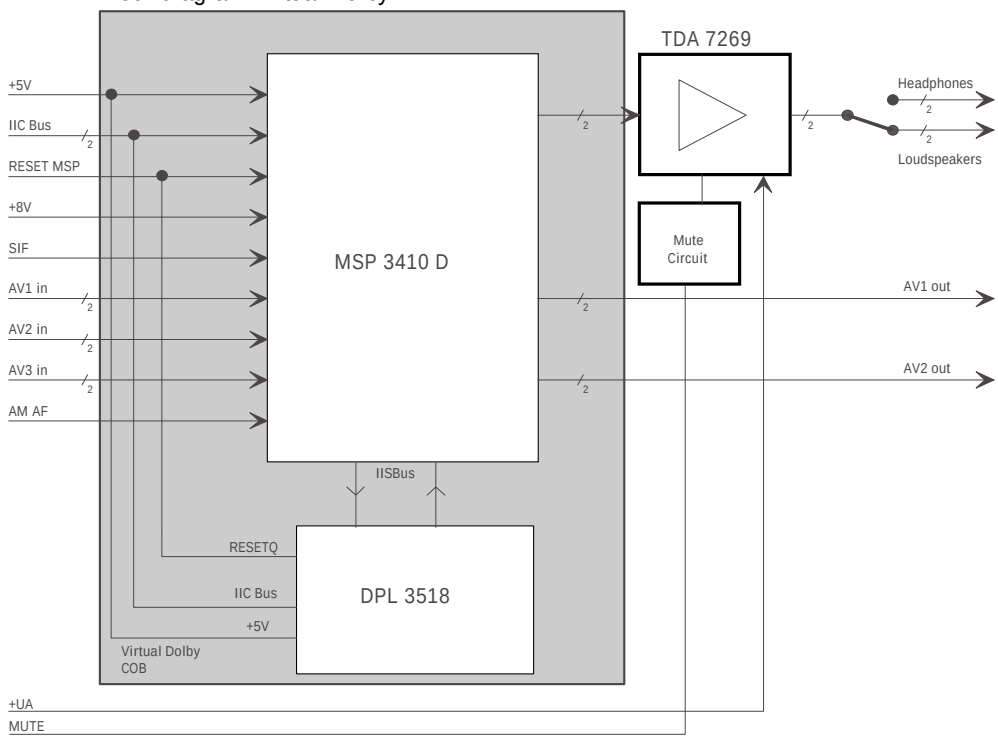
Interface requirement audio part with Dolby Prologic



Block diagram Dolby Prologic



Block diagram Virtual Dolby



IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE

IRIS

CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATION(S)/SOFTWARE/ MODE
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
X	NO SYMPTOM OR PROBLEM FOUND

(*1)
CAUTION
THE 'X' EXTENDED SYMPTO CODES (*-**X) SHOUL ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE	5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
1	GENERAL	**110**	**POWER PROBLEM** 111 NO POWER ON AC 112 NO POWER WHEN USING AC-ADAPTER 113 NO POWER WHEN USING DRY BATTERIES 114 NO POWER WHEN USING RECHARGEABLE BATTERIES 115 NO POWER FROM SOLAR CELL 116 NO POWER WHEN USING A CAR BATTERY 117 SHORT OPERATION TIME/SHORT BATTERY LIFE 118 POWER-OFF FUNCTION NOT WORKING 119 NO SWITCH-ON FROM STANDBY 11A POWERS UP, BUT NO OPERATION 11B CYCLIC POWER ON/OFF 11X OTHER POWER PROBLEM	**120**	**CHARGING PROBLEM** 121 NO BATTERY CHARGING 122 INCOMPLETE BATTERY CHARGE 12X OTHER CHARGING PROBLEM	**130**	**DISPLAY FUNCTION PROBLEM** 131 FAULTY TIMER/COUNTER DISPLAY 132 FAULTY LAMP/LED OPERATION 133 FAULTY LEVEL METER OPERATION 134 FAULTY ON-SCREEN DISPLAY OPERATION 135 ELECTRONIC TUNING DISPLAY FAULT 136 MECHANICAL TUNING DISPLAY FAULT 137 FAULTY TIME CODE DISPLAY 138 FAULTY ALARM/ERROR DISPLAY 139 DISPLAY DIM 13X OTHER DISPLAY FUNCTION PROBLEM	**140**	**ABNORMAL NOISE** 141 CRT DISCHARGING NOISE 142 EHT DISCHARGING NOISE 143 NOISY CABINET 144 NOISY TRANSFORMER 145 NOISY COMPONENT(S) 146 RATTLE 14X OTHER ABNORMAL NOISE	**150**	**REMOTE CONTROL PROBLEM** 151 NO REMOTE CONTROL OPERATION 152 INCORRECT REMOTE CONTROL OPERATION 153 REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM 154 POOR REMOTE CONTROL SENSITIVITY 15X OTHER REMOTE CONTROL PROBLEM	**160**	**PHYSICAL DAMAGE** 161 DAMAGED CABINET 162 DAMAGED HANDLE 163 DAMAGED CONTROL KNOB(S)/BUTTON(S) 164 DAMAGED DOOR/COVER 165 DAMAGED SEAL 166 DAMAGED PLUG OR SOCKET 167 DAMAGED LENS 168 DAMAGED CARTRIDGE OR STYLUS 169 DAMAGED ANTENNA 16A DAMAGED CRT OR VIEWFINDER 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS 16C PRINTED MARKINGS ERASED/PEELED OFF 16X OTHER PHYSICAL DAMAGE	**170**	**GENERAL FUNCTION PROBLEM** 171 FAULTY CLOCK FUNCTION 172 FAULTY SLEEP FUNCTION 173 FAULTY TIMER PROGRAMMING 174 FAULTY TIMER RECORDING 175 SOFTWARE PROGRAMMING PROBLEM 176 FAULTY RECORD MUTE OPERATION 177 FAULTY PROGRAMMED PLAYBACK OPERATION 178 FAULTY MEMORY FUNCTION 17X OTHER GENERAL FUNCTION PROBLEM	**180**	**SPECIAL REQUIREMENTS** 181 TEST AND CHECK 182 GENERAL OVERHAUL 183 SYSTEM/FREQUENCY CONVERSION 184 INITIAL SETUP REQUESTED 185 MODIFICATION/CIRCUIT CHANGE 186 WRONG SET IN CARTON 18X OTHER SPECIAL REQUIREMENTS 18Z SYMPTOM NOT AVAILABLE
2	COMMUNICATION	**210**	**NO RECEPTION** 211 NO AM RECEPTION 212 NO FM RECEPTION 213 NO SW RECEPTION 214 NO VHF RECEPTION 215 NO UHF RECEPTION 216 NO BS RECEPTION 217 NO CS RECEPTION 218 NO HDTV RECEPTION 219 NO QPS RECEPTION 21X OTHER 'NO RECEPTION' PROBLEM	**220**	**POOR RECEPTION** 221 POOR AM RECEPTION 222 POOR FM RECEPTION 223 POOR SW RECEPTION 224 POOR VHF RECEPTION 225 POOR UHF RECEPTION 226 POOR BS RECEPTION 227 POOR CS RECEPTION 228 POOR HDTV RECEPTION 229 POOR QPS RECEPTION 22X OTHER 'POOR RECEPTION' PROBLEM	**230**	**TRANSMISSION PROBLEM** 231 NO TRANSMISSION 232 POOR TRANSMISSION 233 TRANSMISSION LEVEL TOO HIGH 234 NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET 235 POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET 23X OTHER TRANSMISSION PROBLEM	**240**	**NOISY RECEPTION/ TRANSMISSION** 241 LINE NOISE 242 OSCILLATION 243 INTERSTATION INTERFERENCE 24X OTHER NOISE RECEPTION/TRANSMISSION PROBLEM	**250**	**UNSTABLE RECEPTION/ TRANSMISSION** 251 TUNING DRIFT 252 FADING 25X OTHER UNSTABLE RECEPTION/ TRANSMISSION PROBLEM	**260**	**TUNING PROBLEM** 261 MANUAL TUNING PROBLEM 262 AUTOMATIC TUNING PROBLEM 263 INCORRECT TUNING 264 TUNING MEMORY PROBLEM 26X OTHER TUNING PROBLEM	**270**	**SPECIAL COMMUNICATION PROBLEM** 271 FAULTY DIALLING 272 FAULTY CHANNEL SELECTION 273 FAULTY AUTO-ANSWER OPERATION 274 FAULTY MESSAGE READ-OUT FUNCTION 275 FAULTY AUTODIAL MEMORY 276 FAULTY SPEECH PROCESSING 277 NO RINGING TONE 278 WEAK RINGING TONE 27X OTHER SPECIAL COMMUNICATION PROBLEM	**280**	**SPECIAL RECEPTION PROBLEM** 281 FAULTY STEREO RECEPTION 282 FAULTY MAIN CHANNEL (A) FUNCTION 283 FAULTY SUB-CHANNEL (B) FUNCTION 284 FAULTY SSB RECEPTION 285 FAULTY RDS/VPS OPERATION 286 FAULTY TELETEXT RECEPTION 287 FAULTY SATELLITE/RTTY RECEPTION 288 FAULTY FAX OPERATION 28X OTHER SPECIAL RECEPTION PROBLEM
3	PICTURE	**310**	**NO PICTURE** 311 NO PICTURE IN E TO E MODE 312 NO PICTURE IN PLAYBACK MODE 313 NO PICTURE IN VIEWFINDER 314 NO PICTURE, ONLY RASTER 315 NO RASTER, BLACK PICTURE 316 ONLY HORIZONTAL LINE 317 ONLY VERTICAL LINE 31X OTHER 'NO PICTURE' PROBLEM	**320**	**PICTURE LEVEL PROBLEM** 321 PICTURE TOO DARK 322 PICTURE TOO BRIGHT 323 CONTRAST TOO LOW 324 CONTRAST TOO HIGH 325 SATURATED WHITE OR BLACK LEVEL 326 SHADING ON PICTURE 327 ONLY PARTIAL PICTURE 32X OTHER PICTURE LEVEL PROBLEM	**330**	**PICTURE QUALITY PROBLEM** 331 POOR PICTURE RESOLUTION 332 POOR FOCUS 333 RINGING ON PICTURE 334 EXCESSIVE SMEAR/LAG 335 POOR LINEARITY OR GEOMETRY 336 PICTURE SIZE INCORRECT 337 INCORRECT CENTRING OF PICTURE 338 PICTURE SLANTED 339 V-SIZE INCORRECT 33A H-SIZE INCORRECT 33X OTHER PICTURE QUALITY PROBLEM	**340**	**PICTURE NOISE** 341 SNOWY PICTURE 342 DOT NOISE OR DROPOUT ON PICTURE 343 NOISE BARS ON PICTURE 344 BLANKING LINES ON PICTURE 345 BEATING O PICTURE 346 GHOSTING ON PICTURE 347 VCR HEAD SWITCHING NOISE ON PICTURE 348 OVERMODULATION NOISE 34X OTHER PICTURE NOISE PROBLEM	**350**	**UNSTABLE PICTURE** 351 SYNC PROBLEM 352 PICTURE PUMPING 353 PICTURE JITTER 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL) 355 FLICKERING PICTURE 356 FLASHING PICTURE 357 CYCLIC PICTURE MUTING 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE 359 VCR SKEW ERROR 35A FROZEN PICTURE 35B JUMPING/REPEATING PICTURE 35X OTHER 'UNSTABLE PICTURE' PROBLEM	**360**	**POOR PICTURE RECORDING** 361 NO PICTURE RECORDING 362 NO ERASURE PROTECTION FOR VIDEO 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED 364 UNWANTED ERASURE OF PICTURE 365 NO CAMERA RECORDING 366 ONLY ONE FIELD PER FRAME BEING RECORDED 36X OTHER PICTURE RECORDING PROBLEM	**370**	**SPECIAL PICTURE FUNCTION PROBLEM** 371 EDITING PROBLEM 372 FAULTY FADING/WIPER OPERATION 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION 374 FAULTY SUPERIMPOSE/TELOP OPERATION 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION 376 FAULTY PICTURE TRANSMISSION 377 FAULTY DIGITAL SHUTTER FUNCTION 378 FAULTY GENLOCK FUNCTION 379 FAULTY FLASH/STROBE FUNCTION 37A FAULTY DIGITAL PICTURE FUNCTION 37B FAULTY AUTO-EDIT FUNCTION 37X OTHER SPECIAL PICTURE FUNCTION PROBLEM	**380**	**PICTURE DISPLAY/PICKUP PROBLEM** 381 BURN MARK ON DISPLAY/PICKUP 382 SCRATCH ON DISPLAY/PICKUP 383 DUST/DIRT ON DISPLAY/PICKUP 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL 38X OTHER PICTURE DISPLAY/PICKUP PROBLEM
4	COLOUR	**410**	**NO COLOUR** 411 NO COLOUR IN E TO E MODE 412 NO COLOUR IN PLAYBACK MODE 413 NO COLOUR IN VIEWFINDER 414 NO COLOUR IN PART OF PICTURE 41X OTHER 'NO COLOUR' PROBLEM	**420**	**COLOUR LEVEL PROBLEM** 421 WEAK COLOUR 422 EXCESSIVE COLOUR 42X OTHER COLOUR LEVEL PROBLEM	**430**	**POOR COLOUR QUALITY** 431 SOME OR ALL COLOURS MISSING 432 POOR WHITE BALANCE 433 HUE PROBLEM 434 PURITY ERROR 435 LANDING ERROR 436 CONVERGENCE ERROR 437 REGISTRATION ERROR 438 PITCH MOIR... 43X OTHER COLOUR QUALITY PROBLEM	**440**	**NOISY COLOUR** 441 COLOUR NOISE ON A BLACK & WHITE PICTURE 442 COLOUR STREAKING 44X OTHER COLOUR NOISE PROBLEM	**450**	**UNSTABLE COLOUR** 451 COLOUR FLASHING 452 HUE CONSTANTLY CHANGING 453 FLICKERING COLOUR 454 COLOUR NOT LOCKED 45X OTHER UNSTABLE COLOUR PROBLEM	**460**	**POOR COLOUR RECORDING** 461 NO COLOUR RECORDING 46X OTHER COLOUR RECORDING PROBLEM	**470**	**SPECIAL COLOUR FUNCTION PROBLEM** 471 FAULTY AUTOMATIC WHITE BALANCE 472 FAULTY COLOUR EFFECTS FUNCTION 47X OTHER SPECIAL COLOUR FUNCTION PROBLEM	**480**	
5	AUDIO	**510**	**NO AUDIO** 511 NO SOUND IN E TO E MODE 512 NO PLAYBACK OF OUTGOING MESSAGE(S) 513 NO PLAYBACK OF INCOMING MESSAGE(S) 51X OTHER 'NO AUDIO' PROBLEM	**520**	**AUDIO LEVEL PROBLEM** 521 LOW AUDIO LEVEL 522 EXCESSIVE AUDIO LEVEL 523 BALANCE PROBLEM 524 FADER PROBLEM 525 AUDIO LEVEL REMAINING 52X OTHER AUDIO LEVEL PROBLEM	**530**	**AUDIO QUALITY** 531 POOR FREQUENCY RESPONSE 532 DISTORTED AUDIO 533 NO OR POOR TREBLE 534 NO OR POOR BASS 53X OTHER AUDIO QUALITY PROBLEM	**540**	**NOISY AUDIO** 541 HUM 542 HISS 543 CROSSTALK 544 STATIC, POP OR CLICK NOISE 545 BUZZ 546 SCRATCHING NOISE 547 IGNITION NOISE 548 MULTIPATH NOISE 54X OTHER AUDIO NOISE PROBLEM	**550**	**UNSTABLE AUDIO** 551 JUMPING OR REPEATING AUDIO 552 AUDIO PUMPING OR BREATHING 553 AUDIO DROPOUTS 554 CYCLIC AUDIO MUTING 555 WOW AND FLUTTER 556 HOWLING/ACOUSTIC FEEDBACK 55X OTHER UNSTABLE AUDIO PROBLEM	**560**	**POOR AUDIO RECORDING** 561 AUDIO NOT BEING RECORDED 562 NO ERASURE PROTECTION FOR AUDIO 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED 564 UNWANTED ERASURE OF AUDIO 565 MESSAGE NOT BEING RECORDED 56X OTHER AUDIO RECORDING PROBLEM	**570**	**POOR SPECIAL AUDIO FUNCTION** 571 FAULTY FADE OPERATION 572 FAULTY ECHO OPERATION 573 FAULTY MIXING OPERATION 574 FAULTY REPEAT MODE OPERATION 575 FAULTY AUDIO PROCESSING 576 FAULTY SYNC RECORDING OPERATION 577 FAULTY DBB/DOL OPERATION 578 FAULTY NOISE REDUCTION OPERATION 57X OTHER SPECIAL AUDIO FUNCTION PROBLEM	**580**	**STEREO/MULTI MODE OPERATION PROBLEM** 581 NO STEREO OPERATION 582 POOR CHANNEL SEPARATION 583 DIFFERENCE IN PHASE BETWEEN CHANNELS 584 PROBLEM WITH SURROUND SOUND MODE 585 PROBLEM WITH PCM AUDIO MODE 58X OTHER STEREO/MULTI MODE PROBLEM
6	MECHANISM	**610**	**NO MECHANICAL OPERATION** 611 NO DISC ROTATION 612 NO FORWARD OPERATION 613 NO REVERSE OPERATION 614 NO FAST FORWARD OR REWIND FUNCTION 615 NO LOADING 616 NO UNLOADING OR EJECTING OF TAPE 617 NO AUTO SHUT-OFF OPERATION 618 TONEARM DOES NOT MOVE 619 DISC NOT BEING EJECTED 61A MAGAZINE DOES NOT EJECT 61X OTHER 'NO MECHANICAL OPERATION' PROBLEM	**620**	**IRREGULAR MECHANICAL OPERATION** 621 IRREGULAR ROTATION 622 IRREGULAR FORWARD MODE 623 IRREGULAR REVERSE OPERATION 624 IRREGULAR FAST FORWARD OR REWIND FUNCTION 625 IRREGULAR LOADING 626 IRREGULAR UNLOADING OR EJECTING OF TAPE 627 IRREGULAR AUTO SHUT-OFF OPERATION 628 IRREGULAR TONEARM MOVEMENT 629 IRREGULAR EJECTION OF DISC 62A IRREGULAR DIRECTION CHANGE 62X OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM	**630**	**SPEED PROBLEM** 631 SPEED TOO FAST 632 SPEED TOO SLOW 63X OTHER SPEED PROBLEM	**640**	**MECHANICAL NOISE** 641 ROTATION NOISE 642 MOTOR NOISE 643 WIND NOISE 644 TAPE SQUEALING 645 FAN NOISE 646 DISC SCRAPING 647 NOISY TAPE LOADING 64X OTHER MECHANICAL NOISE PROBLEM	**650**		**660**	**DAMAGE TO SOFTWARE** 661 TAPE GETS SCRATCHED 662 DISC GETS SCRATCHED 663 TAPE GETS CHEWED/WRINKLED 664 TAPE JAMMED OR BROKEN 665 TAPE GETS CURLED 666 SLACK TAPE 667 TAPE STICKING 66X OTHER SOFTWARE DAMAGE PROBLEM	**670**	**MECHANICAL OPERATION PROBLEM** 671 FAULTY START/STOP OPERATION 672 FAULTY PAUSE OPERATION 673 FAULTY AUTOMATIC PROGRAM SEARCH 674 FAULTY CUE/REVIEW MODE 675 FAULTY SLOW MOTION OPERATION 676 FAULTY HIGH-SPEED SCANNING MODE 677 FAULTY SPEED COPY FUNCTION 678 FAULTY REPEAT OPERATION 679 FAULTY RECORD REVIEW MODE 67A FAULTY AMS OPERATION 67X OTHER MECHANICAL OPERATION PROBLEM	**680**	**LENS PROBLEM** 681 FOCUS PROBLEM 682 ZOOM PROBLEM 683 IRIS PROBLEM 684 MACRO PROBLEM 68X OTHER LENS PROBLEM
7	DATA PROCESSING	**710**	**NO DATA PROCESSING** 711 NO INITIAL SCREEN 712 SYSTEM DOES NOT RESET 713 SYSTEM DOES NOT BOOT UP 714 NO OPERATION FROM PLUG-IN MODULE 715 NO KEYBOARD OPERATION 716 NO OPERATION FROM OTHER INPUT/OUTPUT 717 NO DATA STORAGE OPERATION 718 NO DATA COMMUNICATION 71X OTHER 'NO DATA PROCESSING' PROBLEM	**720**	**FAULTY DATA PROCESSING OPERATION** 721 INCORRECT DATA 722 SYSTEM RESET WHILE BEING USED 723 SYSTEM LOCKS OUT/CRASHES 724 FAULTY OPERATION OF PLUG-IN MODULE 725 FAULTY KEYBOARD OPERATION 726 FAULTY OPERATION OF OTHER INPUT/OUTPUT 727 FAULTY DATA STORAGE OPERATION 728 FAULTY DATA COMMUNICATION 72X OTHER 'FAULTY DATA PROCESSING' PROBLEM	**730**	**DATA DISPLAY PROBLEM** 731 INCORRECT CHARACTER DISPLAY 732 MISSING DISPLAY CHARACTERS 733 FAULTY GRAPHIC DISPLAY 734 FAULTY SWITCHING BETWEEN GRAPHIC/ CHARACTER MODE 735 FAULTY PROMPT/CURSOR OPERATION 736 DATA DISPLAY COLOUR INCORRECT 737 NO PAGING OR SCROLL MODE 73X OTHER DATA DISPLAY PROBLEM	**740**		**750**		**760**	**DATA READ/WRITE PROBLEM** 761 FORMATTING PROBLEM 762 DATA ON STORAGE MEDIUM BEING LOST 763 FRAME MEMORY PROBLEM 76X OTHER DATA READ/WRITE PROBLEM	**770**	**SPECIAL DATA PROCESSING** 771 FAULTY SELF-DIAGNOSTIC MODE 772 FAULTY WORD PROCESSING FUNCTION 773 FAULTY GRAPHIC EDIT FUNCTION 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM	**780**	
8	PRINTING	**810**	**NO PRINTER OPERATION** 811 NOT PRINTING 812 NO COMMUNICATION WITH PRINTER 813 PAPER NOT LOADING 814 NO PAPER FEED 815 NO IMAGE FIXATION 81X OTHER NO PRINTER OPERATION PROBLEM	**820**	**ERRONEOUS PRINTER OPERATION** 821 PRINT IMAGE REVERSED (NEGATIVE/ POSITIVE) 822 IRREGULAR PAPER FEED 823 ERRONEOUS PRINT MODE SWITCHING 82X OTHER PRINTER OPERATION PROBLEM	**830**	**POOR PRINT QUALITY** 831 INCORRECT PRINTING POSITION 832 LOW PRINT CONTRAST 833 EXCESSIVE PRINT CONTRAST 834 BLURRED PRINT IMAGE 835 PRINT IMAGE NOT SHARP 836 DOTS MISSING-IN PRINT IMAGE 83X OTHER PRINT QUALITY PROBLEM	**840**	**NOISY PRINTING** 841 PRINTING NOISE LINES 842 DIRTY PRINTING 84X OTHER NOISY PRINTING PROBLEM	**850**	**UNSTABLE PRINTER OPERATION** 851 UNSTABLE PAPER LOADING 852 UNSTABLE MULTI-PAPER LOADING 853 INCORRECT LINE-UP OF CHARACTERS 85X OTHER UNSTABLE PRINTER OPERATION PROBLEM	**860**	**RIBBON/PAPER PROBLEMS** 861 RIBBON BROKEN 862 RIBBON STUCK/STICKING 863 RIBBON DERAILED 864 PAPER STUCK/STICKING TO MECHANISM 865 PAPER JAM 86X OTHER RIBBON/PAPER PROBLEM	**870**		**880**	**FAULTY FONT/CHARACTER FUNCTIONS** 881 INCORRECT CHARACTERS 882 INCORRECT CHARACTER SIZE 883 FONT LOADING PROBLEM 88X OTHER FAULTY FONT/CHARACTER FUNCTION PROBLEM

SECTION CODES

ANT	ANTENNA SECTION
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
APR	SIGNAL PROCESSING (ANALOG)
ARM	ARM MECHANISM
BCH	BATTERY CHARGE
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
CTR	CONTROL PANEL
DDM	DISC DRIVE MECHANISM
DFL	DEFLECTION CIRCUIT
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
EXC	EXTERNAL CONNECTOR
FDD	FLOPPY DISC DRIVE
FLX	FLEXIBLE PCB
FMW	FIRMWARE
FPK	FOCUS PACK
HCM	HEAD CARRIAGE MECHANISM

HDD	HARD DISC DRIVE
HFS	HIGH FREQUENCY SECTION (RF)
HOL	CASSETTE HOLDER
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
IMG	IMAGE DISPLAY UNIT
INC	INTERNAL CONNECTOR
INP	SIGNAL INPUT SECTION
KBD	KEYBOARD (SEPARATE)
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
MEM	MEMORY CIRCUIT
MIC	MICROPHONE SECTION
OUT	SIGNAL OUTPUT SECTION
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRG	PROGRAMMING SECTION
PRI	PRINT BLOCK
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PUD	PICK-UP DEVICE
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFM	RIBBON FEED MECHANISM

RFU	BOOSTER/RF UNIT
RHD	ROTARY HEAD(S)
SFT	SOFTWARE (TAPE, DISC, ETC.)
SHD	STATIONARY HEAD(S)
SLD	SLED MECHANISM
SNS	SENSOR UNIT
SPK	SPEAKER
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TIM	TIMER SECTION
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

DEFECT CODES

MECHANICAL		ELECTRICAL	
A	WORN OUT	N	EXHAUSTED, LOW EMISSION
B	DIRTY, CLOGGED	O	BURNT, ARCING, MISSING PIXELS
C	MISALIGNED	P	MISALIGNED
D	CUT, BROKEN	Q	SHORT
E	DEFORMED	R	OPEN
F	SNAPPED	S	LEAKING
G	SCRATCHED	T	BAD CONTACT, CONNECTION
H	CRACKED, PEELED, CORRODED	U	OPEN PATTERN
I	LOOSE	V	CRACKED PCB
J	SHAKY, UNSTABLE	W	COLD OR NO SOLDERING
K	LEAKING	X	BRIDGED SOLDERING
L	DRY (NO LUBRICANT)	Y	WRONG COMPONENT
M	FOREIGN OBJECT	Z	MISSING COMPONENT
		1	SOFTWARE BUG

REPAIR CODES

A	REPLACEMENT	N	MAINTENANCE
B	MECHANICAL ALIGNMENT	O	REFURBISHING
C	ELECTRICAL ALIGNMENT	P	PREVENTIVE PARTS REPLACEMENT
D	RESOLDERING	Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
E	CLEANING	U	EXPLANATION FOR CUSTOMER
F	LUBRICATION	V	ESTIMATION REFUSED
G	REPAIRED ELECTRICAL PARTS	W	ESTIMATION WITH PARTS
H	REPAIRED MECHANICAL PARTS	X	ESTIMATION WITHOUT PARTS
I	S/B MODIFICATION		
J	REMOVED COMPONENT (S)		
K	ADDED COMPONENTS	Y	RETURN WITHOUT REPAIR
L	FUNCTIONAL CHECK	Z	SET EXCHANGE
M	SPECIFICATION MEASUREMENT		

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

EXAMPLE OF USE :

FLAG	SYMPTOM CODE	PART NO	REF. NO	SECTION/PCB	DEFECT CODE	REPAIR CODE	QTY
1	1412	1111111111	R123.	YA22.	R	A	1
.	3641	3456789XX	111..	TDM..	C	B	0

CODE CONDITION | CODE SYMPTÔME | CODE SYMPTÔME ÉTENDU (*1)

SYSTÈME DE CODAGE POUR RÉPARATION IRIS

TABLES DES CODES SYMPTÔMES

IRIS

1	CONSTANT
2	INTERMITTENT
3	APRÈS UN CERTAIN DÉLAI
4	À CHAUD
5	À FROID
6	À LA MISE EN ROUTE
7	VIBRATIONS
8	EN MILIEU HUMIDE
9	À SEC
A	APRÈS UNE CHUTE
B	APRÈS UN COUP DE FOUDRE
C	QUELQUES STATIONS SEULEMENT/SOFTWARE/ MODE
D	QUELQUES STANDARDS SEULEMENT
E	SUR UN SEUL CANAL
F	QUELQUES ENTRÉES SEULEMENT
G	QUELQUES SORTIES SEULEMENT
H	EN VEILLE OU À L'ARRÊT
J	AU POINT EDIT
K	LORSQUE CONNECTÉ
L	TRACES DE LIQUIDE
X	PAS DE DÉFAUT

(*1)
ATTENTION
LES CODES ÉTENDU 'X' (***X) POURRONT SEULEMENT ÊTRE UTILISÉS POUR INDIQUER QU'UNE DÉSIGNATION ADÉQUATE DU SYMPTÔME MANQUE DANS LE GROUPE DE SYMPTÔMES CONCERNÉ

		1	PAS DE FONCTION	2	NIVEAU	3	QUALITÉ	4	BRUIT	5	INSTABILITÉ	6	PROBLÈMES PHYSIQUE OU D'ENREGISTREMENT	7	FONCTION SPÉCIALE	8	AUTRES CONDITIONS
1	GÉNÉRALITÉS	110	PROBLÈME D'ALIMENTATION	120	PROBLÈME DE CHARGEMENT	120	DÉFAUT D'AFFICHAGE	140	BRUITS PARTICULIERS	150	PROBLÈME DE TÉLÉCOMMANDE	160	DOMMAGE PHYSIQUE	170	DÉFAUT DE LA FONCTION GÉNÉRALE	180	DEMANDES SPÉCIALES
		111	PAS D'ALIMENTATION SUR SECTEUR	121	PAS DE CHARGEMENT DE LA BATTERIE	131	AFFICHAGE ERRONÉ DE MINUTERIE/ COMPTEUR	141	BRUITS PARTICULIERS PAR DÉCHARGE DU TUBE CATHODIQUE	151	PAS DE FONCTIONNEMENT DE LA TÉLÉCOMMANDE	161	BOÎTIER ENDOMMAGÉ	171	FONCTIONNEMENT ERRONÉ DE L'HORLOGE/MINUTERIE	181	TEST ET CONTRÔLE
		112	PAS D'ALIMENTATION AVEC ADAPTATEUR SECTEUR	122	CHARGEMENT INCOMPLET DE LA BATTERIE	132	LAMPE/LED DÉFECTUEUX	142	BRUITS PARTICULIERS PAR DÉCHARGE DE LA THT	152	FONCTIONNEMENT ERRONÉ DE LA TÉLÉCOMMANDE	162	POIGNÉ E ENDOMMAGÉE	172	FONCTIONNEMENT ERRONÉ DE L'ARRÊT PROGRAMMÉ PAR MINUTERIE	182	REMISE EN ÉTAT
		113	PAS D'ALIMENTATION AVEC PILES SÈCHES	12X	AUTRE PROBLÈME DE CHARGE	133	VU-MÈTRE DÉFECTUEUX	143	BRUITS PARTICULIERS À CAUSE DE L'ÉBÉNISTERIE	153	PROBLÈME DE PROGRAMMATION/MODE D'APPRENTISSAGE DE LA TÉLÉCOMMANDE	163	BOUTON/BOUTON DE CONTRÔLE ENDOMMAGÉ	173	PROGRAMMATION ERRONÉE DE LA MINUTERIE	183	CONVERSION DE FRÉQUENCE/SYSTÈME
		114	PAS D'ALIMENTATION AVEC BATTERIE RECHARGEABLE			134	AFFICHAGE ON-SCREEN DÉFECTUEUX	144	BRUITS PARTICULIERS À CAUSE DE TRANSFORMATEURS	154	FAIBLE SENSIBILITÉ DE LA TÉLÉCOMMANDE	164	TRAPPE/COUVERCLE ENDOMMAGÉ	174	FONCTIONNEMENT ERRONÉ DE L'ENREGISTREMENT DÉCLENCHÉ PAR MINUTERIE	184	RÉGLAGE INITIAL DEMANDÉ
		115	PAS D'ALIMENTATION AVEC BATTERIE SOLAIRE			135	AFFICHAGE ÉLECTRIQUE D'ACCORD	145	BRUITS PARTICULIERS À CAUSE DE COMPOSANTS	15X	AUTRE PROBLÈME DE TÉLÉCOMMANDE	165	JOINTS ENDOMMAGÉS			185	MODIFICATION/CHANGEMENT DE CIRCUIT
		116	PAS D'ALIMENTATION AVEC BATTERIE VOITURE			136	DÉFECTUEUX					166	PRISE OU FICHE ENDOMMAGÉE	175	PROBLÈME D'INITIALISATION DE LOGICIEL	186	ERREUR DE MODÈLE DANS LE CARTON
		117	COURTE DURÉE DE FONCTIONNEMENT/DE BATTERIE			137	AFFICHAGE MÉCANIQUE D'ACCORD DÉFECTUEUX	146	GRINCEMENT			167	LENTILLE ENDOMMAGÉE	176	FONCTIONNEMENT ERRONÉ DE LA PAUSE À L'ENREGISTREMENT	18X	DEMANDE PARTICULIÈRE DU CLIENT
		118	NE S'ÉTEINT PAS			138	AFFICHAGE DU TIME CODE DÉFECTUEUX	14X	AUTRE BRUIT ANORMAL			168	CELLULE OU POINTE DE LECTURE ENDOMMAGÉE	177	FONCTIONNEMENT ERRONÉ DE LA LECTURE PROGRAMMÉE	182	PAS DE SYMPTÔME DISPONIBLE
		119	PAS DE MISE EN ROUTE À PARTIR DE LA POSITION VEILLE			139	AFFICHAGE D'ALARME/D'ERREUR DÉFECTUEUX					169	ANTENNE ENDOMMAGÉE	178	FONCTION MÉMOIRE DÉFECTUEUSE		
		11A	SEULEMENT ALIMENTATION, PAS DE FONCTIONNEMENT			13X	MANQUE DE CONTRASTE DE L'AFFICHEUR					16A	TUBE CATHODIQUE OU VISEUR ENDOMMAGÉ	17X	AUTRE FONCTION DÉFECTUEUSE		
		11B	MARCHE/ARRÊT CYCLIQUES			13X	AUTRE PROBLÈME D'AFFICHEUR					16B	COMPOSANT MANQUANT OU NON CONFORME				
		11X	AUTRE PROBLÈME D'ALIMENTATION									16C	DISPARITION DE LA SIGNALÉTIQUE				
												16X	AUTRE DOMMAGE PHYSIQUE				
2	COMMUNICATION	210	PAS DE RÉCEPTION	220	PROBLÈME DU NIVEAU DE RÉCEPTION	230	PROBLÈME D'EMISSION	240	COMMUNICATION BRUITÉE	250	COMMUNICATION INSTABLE	260	DÉFAUT D'ACCORD	270	DÉFAUT DE COMMUNICATION SPÉCIALE	280	MAUVAISE RÉCEPTION PARTICULIÈRE
		211	PAS DE RÉCEPTION AM	221	RÉCEPTION AM FAIBLE	231	PAS D'ÉMISSION	241	BRUIT DE LIGNE	251	DÉRIVE DE L'ACCORD	261	DÉFAUT DE L'ACCORD MANUEL	271	DÉFAUT DE LA COMPOSITION DU NUMÉRO	281	RÉCEPTION STÉRÉO ERRONÉE
		212	PAS DE RÉCEPTION FM	222	RÉCEPTION FM FAIBLE	232	ÉMISSION TROP FAIBLE	242	OSCILLATION	252	FADING	262	DÉFAUT DE L'ACCORD AUTOMATIQUE	272	DÉFAUT DE LA SÉLECTION DES CANAUX	282	FONCTIONNEMENT ERRONÉ DU CANAL PRINCIPAL (A)
		213	PAS DE RÉCEPTION OC	223	RÉCEPTION OC FAIBLE	233	ÉMISSION TROP FORTE	243	INTERFÉRENCE ENTRE STATIONS	25X	AUTRE PROBLÈME D'INSTABILITÉ DE RÉCEPTION OU TRANSMISSION	263	ACCORD ERRONÉ	273	DÉFAUT DE LA RÉPONSE AUTOMATIQUE	283	FONCTIONNEMENT ERRONÉ DU CANAL SUPPLÉMENTAIRE (B)
		214	PAS DE RÉCEPTION VHF	224	RÉCEPTION VHF FAIBLE	234	PAS DE COMMUNICATION ENTRE L'UNITÉ DE BASE ET L'ÉCOUTEUR	24X	AUTRE PROBLÈME DE TRANSMISSION OU DE RÉCEPTION BRUITÉE	26X	DÉFAUT DE LA MÉMOIRE DES CANAUX	264	DÉFAUT DE LA MÉMOIRE DES CANAUX	274	DÉFAUT DE LA LECTURE DU MESSAGE	284	MAUVAISE RÉCEPTION SSB
		215	PAS DE RÉCEPTION UHF	225	RÉCEPTION UHF FAIBLE	235	COMMUNICATION FAIBLE ENTRE L'UNITÉ DE BASE ET L'ÉCOUTEUR				AUTRE PROBLÈME DE SYNTONISATION		AUTRE PROBLÈME DE SYNTONISATION	275	DÉFAUT DE LA MÉMOIRE D'APPEL AUTOMATIQUE	285	MAUVAIS FONCTIONNEMENT RDS/VPS
		216	PAS DE RÉCEPTION SATELLITE	226	RÉCEPTION SATELLITE FAIBLE	23X	AUTRE PROBLÈME DE TRANSMISSION							276	DÉFAUT DU TRAITEMENT DE LA VOIX	286	MAUVAISE RÉCEPTION TÉLÉTEXTE
		217		227										277	PAS DE TONALITÉ D'APPEL	287	MAUVAISE RÉCEPTION SATELLITE/RTTY
		218	PAS DE RÉCEPTION EN HAUTE DÉFINITION	228	RÉCEPTION EN HAUTE DÉFINITION FAIBLE									278	SONNERIE FAIBLE	288	MAUVAIS FONCTIONNEMENT FAX
		219	PAS DE RÉCEPTION GPS	229	RÉCEPTION GPS FAIBLE									27X	AUTRE DÉFAUT DANS LA COMMUNICATION	28X	AUTRE PROBLÈME PARTICULIER DE RÉCEPTION
		21X	AUTRE PROBLÈME DE RÉCEPTION	22X	AUTRE PROBLÈME DE RÉCEPTION FAIBLE												
3	IMAGE	310	ABSENCE D'IMAGE	320	DÉFAUT DU NIVEAU D'IMAGE	330	MAUVAISE QUALITÉ D'IMAGE	340	IMAGE BRUITÉE	350	IMAGE INSTABLE	360	MAUVAIS ENREGISTREMENT D'IMAGE	370	MAUVAISE FONCTION SPÉCIALE DE L'IMAGE	380	DÉFAUT D'AFFICHAGE/TUBE IMAGE
		311	ABSENCE D'IMAGE EN MODE EE	321	IMAGE TROP SOMBRE	331	DÉFINITION ERRONÉE DE L'IMAGE	341	NEIGE	351	PROBLÈME DE SYNCHRONISATION	361	PAS D'ENREGISTREMENT D'IMAGE	371	PROBLÈME DE MONTAGE	381	AFFICHAGE/TUBE IMAGE BRÛLÉ
		312	ABSENCE D'IMAGE EN LECTURE	322	IMAGE TROP CLAIRE	332	FOYER ERRONÉ	342	DOT OU DROPOUTS DANS L'IMAGE	352	POMPAGE DE L'IMAGE	362	PAS DE PROTECTION D'EFFACEMENT DE LA VIDÉO	372	FADING/ZOOM ERRONÉ	382	AFFICHAGE/TUBE IMAGE RAYÉ
		313	ABSENCE D'IMAGE DANS LE VISEUR	323	CONTRASTE FAIBLE	333	FRANGES SUR L'IMAGE	343	BARRE DE BRUIT DANS L'IMAGE	353	JITTER DANS L'IMAGE			373	COMMUNICATION NÉGATIVE/POSITIVE ERRONÉE	383	POUSSIÈ RE SUR L'AFFICHAGE/TUBE IMAGE
		314	ABSENCE D'IMAGE, TRAME SEULE	324	CONTRASTE ÉLEVÉ	334	FANTÔME/RETARD EXCESSIF	344	LIGNES D'EFFACEMENT DANS L'IMAGE	354	VACILLEMENT DE L'IMAGE (HORIZONTAL OU VERTICAL)	363	PAS D'EFFACEMENT DE L'ENREGISTREMENT VIDÉO PRÉCÉDENT	374	SUPERPOSITION/TELOP ERRONÉ	384	LUMINOPHORE/PIXEL MANQUANT SUR L'AFFICHAGE/TUBE IMAGE
		315	PAS DE TRAME, ÉCRAN NOIR	325	SATURATION DU NIVEAU DU BLANC OU DU NOIR	335	LINÉARITÉ OU GÉOMÉTRIE ERRONÉE	345	RONFLEMENT DANS L'IMAGE					375	FONCTION D'IMAGE NUMÉRIQUE/P-IN-P ERRONÉE	385	PHOSPHORE OU PIXEL BLANC
		316	LIGNE HORIZONTALE SEULEMENT	326	OMBRE	336	DIMENSION ERRONÉE DE L'IMAGE	346	HALOS DANS L'IMAGE	355	PAPILLOTTEMENT DE L'IMAGE	364	EFFACEMENT INOPINÉ DE L'IMAGE	376	TRANSMISSION D'IMAGE ERRONÉE	38X	AUTRE DÉFAUT D'IMAGE DU CAPTEUR OU DE L'AFFICHEUR
		317	LIGNE VERTICALE SEULEMENT	327	IMAGE TRONQUÉE	337	CENTRAGE ERRONÉ DE L'IMAGE	347	BRUIT DE COMMUTATION DES TÊTES	356	FLASH DE L'IMAGE	365	PAS D'ENREGISTREMENT CAMÉRA	377	FONCTION D'OBTURATEUR ERRONÉE		
		31X	AUTRE PROBLÈME D'ABSENCE D'IMAGE	32X	AUTRE PROBLÈME DE NIVEAU D'IMAGE	338	IMAGE INCLINÉE	348	BRUIT DE SURMODULATION	357	MUTING CYCLIQUE DE L'IMAGE	366	ENREGISTREMENT D'UNE SEULE TRAME	378	FONCTION GENLOCK ERRONÉE		
						339	V-SIZE INSUFFISANT	34X	AUTRE PROBLÈME D'IMAGE BRUITÉE	358	INSTABILITÉ D'IMAGE À LA MISE EN MARCHE	36X	AUTRE PROBLÈME D'ENREGISTREMENT	379	FONCTION FLASH/STROBOSCOPE ERRONÉE		
						33A	H-SIZE INSUFFISANT			359	DISTORSION EN PARALLÉLOGRAMME			37A	FONCTION D'IMAGE NUMÉRIQUE ERRONÉE		
						33X	AUTRE PROBLÈME DE GÉOMÉTRIE D'IMAGE			35A	IMAGE FIGÉE			37B	AUTO-EDIT ERRONÉ		
										35B	SAUT/RÉPÉTITION D'IMAGE			37X	AUTRE FONCTION SPÉCIALE DÉFECTUEUSE		
										35X	AUTRE PROBLÈME D'INSTABILITÉ DE L'IMAGE						
4	COULEUR	410	ABSENCE DE COULEUR	420	MANQUE/EXCÈS DE COULEUR	430	MAUVAISE QUALITÉ DE COULEUR	440	COULEUR BRUITÉE	450	COULEUR INSTABLE	460	MAUVAIS ENREGISTREMENT DE COULEUR	470	MAUVAISE FONCTION SPÉCIALE DE COULEUR	480	
		411	ABSENCE DE COULEUR EN MODE EE	421	MANQUE DE COULEUR	431	ABSENCE DE CERTAINES COULEURS	441	COULEUR BRUITÉE EN NOIR ET BLANC	451	FLASH DE COULEUR	461	PAS D'ENREGISTREMENT DE LA COULEUR	471	MAUVAISE BALANCE AUTOMATIQUE DU BLANC		
		412	ABSENCE DE COULEUR EN LECTURE	422	EXCÈS DE COULEUR	432	MAUVAISE BALANCE DU BLANC	442	RAYURES DE COULEUR	452	CHANGEMENT DE TEINTE CONTINUEL	46X	AUTRE PROBLÈME D'ENREGISTREMENT DE LA COULEUR	472	MAUVAIS FONCTIONNEMENT DES EFFETS DE COULEUR		
		413	ABSENCE DE COULEUR DANS LE VISEUR	42X	AUTRE PROBLÈME DE NIVEAU DE COULEUR	433	PROBLÈME DE TEINTE	44X	AUTRE PROBLÈME DE COULEURS BRUITÉES	453	PAPILLOTTEMENT DE COULEUR			47X	AUTRE FONCTION LIÉE À LA COULEUR DÉFECTUEUSE		
		414	ABSENCE DE COULEUR DANS UNE PARTIE DE L'IMAGE			434	ERREUR DE PURETÉ			454	PAS DE VERROUILLAGE DE COULEUR						
		41X	AUTRE PROBLÈME D'ABSENCE DE COULEUR			435	MAUVAIS IMPACT DU FAISCEAU			45X	AUTRE PROBLÈME D'INSTABILITÉ DES COULEURS						
						436	ERREUR DE CONVERGENCE										
						437	SUPERPOSITION ERRONÉE DES COULEURS										
						438	PHÉNOMÈNE DE MOIRAGE										
						43X	AUTRE PROBLÈME DE QUALITÉ DES COULEURS										
5	SON	510	ABSENCE DE SON	520	MANQUE/EXCÈS DE SON	530	QUALITÉ DU SON	540	QUALITÉ DU SON	550	SON INSTABLE	560	MAUVAIS ENREGISTREMENT DU SON	570	MAUVAISE FONCTION AUDIO SPÉCIALE	580	MAUVAISE FONCTION STÉRÉO/MULTI
		511	ABSENCE DE SON EN MODE EE	521	MANQUE DE SON	531	MAUVAISE RÉPONSE EN FRÉQUENCE	541	RONFLEMENT	551	SAUT OU RÉPÉTITION DU SON	561	PAS D'ENREGISTREMENT DU SON	571	MAUVAISE FONCTION DE FADING	581	PAS DE STÉRÉO
		512	PAS DE LECTURE DES MESSAGES	522	EXCÈS DE SON	532	DISTORSION DU SON	542	SIFFLEMENT	552	POMPAGE OU FLUCTUATION DU SON	562	PAS DE PROTECTION CONTRE L'EFFACEMENT DU SON	572	MAUVAISE FONCTION DE L'ÉCHO	582	MAUVAISE SÉPARATION
		513	TÉLÉPHONIQUES	523	PROBLÈME DE BALANCE	533	PAS D'AIGUES	543	INTERFÉRENCES	553	DROPOUTS AUDIO	563	PAS D'EFFACEMENT DE L'ENREGISTREMENT	573	MAUVAISE FONCTION DE MÉLANGE	583	DIFFERENCE DE PHASE ENTRE CANAUX
			PAS DE LECTURE DES MESSAGES LAISSÉS	524	PROBLÈME DE FADING	534	PAS DE GRAVES	544	STATIQUE, CLAQUEMENT OU CLIQUETIS	554	MUTING CYCLIQUE DU SON	564	PRÉCÉDENT	574	MAUVAISE FONCTION DE RÉPÉTITION	584	PROBLÈME EN MODE SURROUND
		51X	AUTRE PROBLÈME D'ABSENCE DE SON	525	NIVEAU SONORE FIXE	53X	AUTRE PROBLÈ ME DE QUALITÉ SONORE	545	BOURDONNEMENT	555	PLEURAGE ET SCINTILLEMENT	565	PAS DE L'ENREGISTREMENT	575	TRAITEMENT DE SON ERRONÉ	585	PROBLÈME EN MODE PCM AUDIO
				52X	AUTRE PROBLÈME DE NIVEAU SONORE			546	BRUIT PRODUIT PAR POTENTIOMÈTRE	556	HURLEMENT/RÉACTION ACOUSTIQUE	56X	EFFACEMENT INOPINÉ DU SON	576	MAUVAIS ENREGISTREMENT SYNCHRO	58X	DÉFAUT DE SON DANS UN MODE PARTICULIER
								547	BRUIT D'ALLUMAGE/D'ACCROCHAGE	557	AUTRE PROBLÈME D'INSTABILITÉ SONORE		PAS D'ENREGISTREMENT DU MESSAGE	577	MAUVAISE FONCTION DBB/DOL		
								548	BRUIT MULTIVOIE				AUTRE PROBLÈME D'ENREGISTREMENT AUDIO	578	MAUVAISE FONCTION DU RÉDUCTEUR DE BRUIT		
								54X	AUTRE PROBLÈME DE SON BRUITÉ					57X	AUTRE FONCTION SONORE DÉFECTUEUSE		
6	MÉCANISMES	610	PAS DE FONCTION MÉCANIQUE	620	FONCTION MÉCANIQUE IRRÉGULIÈRE	630	PROBLÈME DE VITESSE	640	BRUIT MÉCANIQUE	650		660	SOFTWARE ENDOMMAGÉ	670	MAUVAISE FONCTION MÉCANIQUE	680	DÉFAUT DE L'OBJECTIF
		611	PAS DE ROTATION DU DISQUE	621	ROTATION IRRÉGULIÈRE	631	TROP VITE	641	BRUIT DE ROTATION			661	BANDE RAYÉE	671	MAUVAISE FONCTION DE DÉMARRAGE/ARRÊT	681	DÉFAUT DU FOYER
		612	PAS DE FWD	622	FWD IRRÉGULIER	632	TROP LENT	642	BRUIT DE MOTEUR			662	DISQUE RAYÉ	672	MAUVAISE FONCTION DE PAUSE	682	DÉFAUT DU ZOOM
		613	PAS DE REVERSE	623	RÉVERSE IRRÉGULIER	63X	AUTRE PROBLÈME DE VITESSE	643	SOUFFLE			663	BANDE FROISSÉE	673	MAUVAISE RECHERCHE AUTOMATIQUE DU PROGRAMME	683	DÉFAUT DE L'IRIS
		614	PAS DE FF OU DE REW	624	FF OU REW IRRÉGULIER			644	GRINCEMENT DE BANDE			664	BANDE BOURRÉE/COUPÉE	674		684	DÉFAUT DU MACRO
		615	PAS DE CHARGEMENT	625	CHARGEMENT IRRÉGULIER			645	BRUIT DE VENTILATEUR			665	BANDE VRILLÉE	675	MAUVAISE FONCTION CUE/REVIEW	68X	AUTRE PROBLÈME DE LENTILLE
		616	PAS D'ÉJECTION OU DE DÉCHARGEMENT DE LA BANDE	626	ÉJECTION OU DÉCHARGEMENT IRRÉGULIER DE LA BANDE			646	GRATTEMENT DE DISQUE			666	BANDE DÉTENDUE	676	MAUVAISE FONCTION DU RALENTI		
		617	PAS D'ARRÊT AUTOMATIQUE	627	ARRÊT AUTOMATIQUE IRRÉGULIER			647	CHARGEMENT DE CASSETTE BRUYANT			667	BANDE COLLÉE	677	MAUVAISE FONCTION DU BALAYAGE RAPIDE		
		618	PAS DE MOUVEMENT DU BRAS	628	MOUVEMENT IRRÉGULIER DU BRAS			64X	AUTRE PROBLÈME DE BRUIT MÉCANIQUE			66X	AUTRE DOMMAGE OCCASIONNÉ AU SUPPORT D'ENREGISTREMENT	678	MAUVAISE FONCTION DE LA VITESSE DE COPIE		
		619	PAS D'ÉJECTION DU DISQUE	629	ÉJECTION IRRÉGULIÈRE DU DISQUE									679	MAUVAISE FONCTION DE RÉPÉTITION		
		61A	PAS D'ÉJECTION DU MAGASIN	62A	CHANGEMENT DE DIRECTION INCONTRÔLÉ									67A	MAUVAISE FONCTION DE REC REVIEW		
		61X	AUTRE PROBLÈME DE NON FONCTIONNEMENT MÉCANIQUE	62X	AUTRE PROBLÈME DE MOUVEMENT INCONTRÔLÉ									67X	FONCTION AMS DÉFECTUEUSE AUTRE FONCTION MÉCANIQUE DÉFECTUEUSE		
7	TRAITEMENT DE DONNÉES	710	PAS DE TRAITEMENT DE DONNÉES	720	MAUVAIS TRAITEMENT DE DONNÉES	730	MAUVAIS AFFICHAGE DE DONNÉES	740		750		760	MAUVAISE LECTURE/ ÉCRITURE DE DONNÉES	770	MAUVAIS TRAITEMENT SPÉCIAL DE DONNÉES	780	
		711	ABSENCE D'ÉCRAN INITIAL	721	DONNÉES FAUSSÉES	731	CARACTÈRES FAUX					761	MAUVAIS FORMATAGE	771	MAUVAISE FONCTION D'AUTO-DIAGNOSTIC		
		712	PAS DE RÉINITIALISATION DU SYSTÈME	722	RÉINITIALISATION DU SYSTÈME PENDANT LE FONCTIONNEMENT	732	CARACTÈRES MANQUANTS					762	DESTRUCTION DE DONNÉES	772	MAUVAISE FONCTION DE TRAITEMENT DE TEXTE		
		713	PAS DE DÉMARRAGE DU SYSTÈME			733	AFFICHAGE GRAPHIQUE DÉFECTUEUX					763	PROBLÈME DU SUPPORT MÉMOIRE				
		714	MODULE ENFICHABLE NE FONCTIONNE PAS	723	INTERRUPTION DU SYSTÈME	734	COMMUNICATION ERRONÉE ENTRE LES MODES GRAPHIQUE ET CARACTÈRES					76X	AUTRE PROBLÈME DE LECTURE OU D'ENREGISTREMENT DES DONNÉES	773	MAUVAIS MONTAGE GRAPHIQUE		
		715	CLAVIER NE FONCTIONNE PAS	724	FONCTIONNEMENT ERRONÉ DU MODULE ENFICHABLE	735	MAUVAISE FONCTION DU CURSEUR/PROMPT							77X	AUTRE FONCTION DE TRAITEMENT DES DONNÉES DÉFECTUEUSE		
		716	AUTRES ENTRÉES/SORTIES NE FONCTIONNENT PAS	725	FONCTIONNEMENT ERRONÉ DU CLAVIER	736	COULEUR ERRONÉE DE L'AFFICHAGE DES DONNÉES										
		717	PAS DE SAUVEGARDE DES DONNÉES	726	FONCTIONNEMENT ERRONÉ DES AUTRES ENTRÉES/SORTIES	737	PAS DE PAGINATION OU DE DÉFILEMENT										
		718	PAS DE COMMUNICATION DE DONNÉES	727	MAUVAISE SAUVEGARDE DE DONNÉES	73X	AUTRE PROBLÈME DANS L'AFFICHAGE DES DONNÉES										
		71X	AUTRE PROBLÈME D'ABSENCE DE TRAITEMENT DES DONNÉES	728	MAUVAISE COMMUNICATION DE DONNÉES												
				72X	AUTRE DÉFAUT DANS LE TRAITEMENT DES DONNÉES												
8	IMPRESSION	810	PAS DE FONCTION DE L'IMPRIMANTE	820	FONCTION ERRONÉE DE L'IMPRIMANTE	830	MAUVAISE QUALITÉ D'IMPRESSION	840	IMPRESSION BRUITÉE	850	FONCTIONNEMENT INSTABLE DE L'IMPRIMANTE	860	DÉFAUT DE RUBANT/PAPIER	870		880	MAUVAISE FONCTION DE POLICES/CARACTÈRES
		811	PAS D'IMPRESSION	821	IMAGE INVERSÉE (NÉGATIF/POSITIF)	831	POSITIONNEMENT ERRONÉ DE L'IMPRESSION			851	CHARGEMENT INSTABLE DU PAPIER	861	RUBAN COUPÉ			881	CARACTÈRES ERRONÉS
		812	PAS DE COMMUNICATION AVEC L'IMPRIMANTE	822	AVANCEMENT ERRONÉ DU PAPIER	832	CONTRASTE D'IMPRESSION FAIBLE	841	TRAITS SUR L'IMPRESSION	852	CHARGEMENT MULTIPAPIER INSTABLE	862	RUBAN COLLÉ			882	MAUVAISE TAILLE DES CARACTÈRES
		813	PAS DE CHARGEMENT DU PAPIER	823	COMMUNICATION ERRONÉE DU MODE D'IMPRESSION	833	CONTRASTE D'IMPRESSION EXCESSIF	842	IMPRESSION SALE	853	CARACTÈRES NON ALIGNÉS	863	RUBAN HORS GUIDES			883	MAUVAIS CHARGEMENT DES POLICES DE CARACTÈRES
		814	PAS D'AVANCEMENT DU PAPIER			834	IMPRESSION FLOUE	84X	AUTRE PROBLÈME D'IMPRESSION BRUITÉE	85X	AUTRE PROBLÈME D'IMPRESSION IRRÉGULIÈRE	864	PAPIER ADHÉRANT AU MÉCANISME				
		815	PAS DE DURABILITÉ DE L'IMAGE	82X	AUTRE PROBLÈME D'IMPRESSION DANS LE PROCESSUS	835	IMPRESSION VAGUE					865	BOURRAGE DE PAPIER			88X	AUTRE PROBLÈME DE POLICES DE CARACTÈRES
		81X	AUTRE PROBLÈME D'ABSENCE D'IMPRESSION			836	POINT MANQUANT DANS L'IMPRESSION										
						835	AUTRE PROBLÈME DE QUALITÉ D'IMPRESSION										

CODES DE SECTION

ANT	ÉTAGE D'ANTENNE
APA	TRAITEMENT AUDIO ANALOGIQUE
APD	TRAITEMENT AUDIO DIGITAL
APR	TRAITEMENT DES SIGNAUX (ANALOGIQUE)
ARM	MÉCANISME DU BRAS
BCH	CHARGEMENT DE BATTERIE
BZL	COUVERCLE
CBT	BOÎTIER
CHA	CHÂSSIS
CLK	ÉTAGE DE MINUTERIE
CPA	TRAITEMENT COULEUR ANALOGIQUE
CPD	TRAITEMENT COULEUR DIGITAL
CRT	ÉCRAN CATHODIQUE
CTR	PANNEAU DE CONTRÔLE
DDM	ÉTAGE D'ENTRAÎNEMENT DU DISQUE
DFL	CIRCUIT DE DÉVIATION
DPR	TRAITEMENT DES SIGNAUX (NUMÉRIQUE)
ERA	CIRCUIT EFFACEMENT
EXC	CONNECTEUR EXTERNE
FDD	ENTRAÎNEMENT DU DISQUE FLEXIBLE
FLX	PLAQUETTE FLEXIBLE
FMW	PROGRAMMATION FIXE
FPK	CIRCUIT DE MISE AU POINT
HCM	MÉCANISME DE SUPPORT DE TÊTE

HDD	ENTRAÎNEMENT DU DISQUE DUR
HFS	ÉTAGE DE HAUTE FRÉQUENCE
HOL	SUPPORT DE CASSETTE
IDS	CIRCUIT DE DISPLAY
IFC	CIRCUIT FI
IMG	UNITE D'AFFICHAGE D'IMAGES
INC	CONNECTEUR INTERNE
INP	ÉTAGE D'ENTRÉE DES SIGNAUX
KBD	CLAVIER
LDG	MÉCANISME DE CHARGEMENT
LNM	MÉCANISME DE LENTILLE
MEM	ÉTAGE DE MÉMOIRE
MIC	ÉTAGE DE MICROPHONE
OUT	ÉTAGE DE SORTIE DES SIGNAUX
PFM	MÉCANISME D'AVANCEMENT DU PAPIER
PIN	GALET/LEVIER PRESSEUR
PRG	ÉTAGE DE PROGRAMMATION
PRI	BLOC D'IMPRIMANTE
PRT	CIRCUIT DE PROTECTION
PSU	ALIMENTATION
PUD	PHONOLECTEUR
PWA	AMPLIFICATEUR DE PUISSANCE
REM	TÉLÉCOMMANDE
RFM	MÉCANISME D'AVANCEMENT DU RUBAN

RFU	AMPLIFICATEUR/UNITÉ RF
RHD	TÊTE(S) ROTATIVE(S)
SFT	SOFTWARE (BANDE, DISQUE, ETC.)
SHD	TÊTE(S) FIXE(S)
SLD	MÉCANISME DE DÉPLACEMENT
SNS	UNITÉ DE DÉTECTION
SPK	HAUT-PARLEUR
SRS	ÉTAGE DE LA BOBINE DÉBITRICE
STA	BLOQUE STATIQUE
SVO	ÉTAGE D'ASSERVISSEMENT
SYS	ÉTAGE DU SYSTÈME DE CONTRÔLE
TDM	MÉCANISME D'ENTRAÎNEMENT DE LA BANDE
THR	MÉCANISME DE MISE EN PLACE
TIM	ÉTAGE D'HORLOGE
TNR	LEVIER DE RÉGLAGE DE LA TENSION DE BANDE
TPT	PARCOURS DE BANDE
TRS	ÉTAGE DE LA BOBINE RÉCEPTRICE
TUN	ÉTAGE DE SYNTONISATION
TXT	TRAITEMENT DE TEXTE
VPA	TRAITEMENT VIDÉO ANALOGIQUE
VPD	TRAITEMENT VIDÉO DIGITAL
VWF	VISEUR
WIR	CÂBLE
XXX	PIÈCES ESTHÉTIQUES

CODES DE DÉFAUTS

MÉCANIQUE		ÉLECTRIQUE	
A	USÉ	**N**	ÉPUISÉ, ÉMISSION FAIBLE
B	SALE, MACULÉ	**O**	BRÛLÉ, ARC, PIXELS MANQUANTS
C	DÉRÉGLAGE	**P**	DÉRÉGLAGE
D	COUPURE, DÉFECTUEUX	**Q**	COURT-CIRCUIT
E	DÉFORMATION	**R**	OUVERTURE
F	ENCLENCHEMENT, CALAGE	**S**	FUITE
G	ÉGRATIGNURES	**T**	MAUVAIS CONTACT, SOUDURE
H	FISSURE, PELURE, CORROSION	**U**	CIRCUIT OUVERT
I	DÉTACHEMENT	**V**	PLAQUETTE FISSURÉE
J	INSTABLE	**W**	SOUDURE SÈCHE OU MANQUANTE
K	FUITE	**X**	SOUDURE EN PONT
L	SEC (PAS DE LUBRIFIANT)	**Y**	PIÈCE ERRONÉE
M	OBJET, CORPS ÉTRANGER	**Z**	PIÈCE MANQUANTE
		1	ERREUR DE LOGICIEL

CODES DE RÉPARATION

A	REMPLACEMENT	**N**	ENTRETIEN
B	RÉGLAGE MÉCANIQUE	**O**	REMISE EN ÉTAT
C	RÉGLAGE ÉLECTRIQUE	**P**	REMPLACEMENT PRÉVENTIF DE PIÈCES
D	RESSOUDURE PRÉVENTIVE	**Q**	ACTION PRÉVENTIVE SANS REMPLACEMENT DE PIÈCES
E	NETTOYAGE	**U**	EXPLICATIONS COMPLÉMENTAIRES
F	LUBRIFICATION	**V**	DEVIS REFUSÉ
G	RÉPARATION PIÈCES ÉLECTRIQUES	**W**	DEVIS INCLUANT LES PIÈCES
H	RÉPARATION PIÈCES MÉCANIQUES	**X**	DEVIS EXCLUANTS LES PIÈCES
I	MODIFICATION SELON BULLETIN TECHNIQUE		
J	PIÈCES ENLEVÉES		
K	PIÈCES AJOUTÉES	**Y**	RETOUR AU CLIENT SANS RÉPARATION
L	CONTRÔLE FONCTIONNEL	**Z**	ÉCHANGE D'APPAREIL
M	MESURE DES SPÉCIFICATIONS		

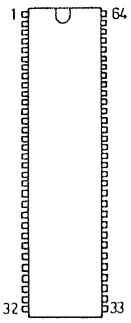
EXEMPLE :

CODE SYMPTÔME	RÉFÉRENCE SCHEMA	CODE SECTION	CODE PLAQUETTE	CODE DÉFAUT	CODE RÉPARATION
1412 3641	R123.... 111.....	TDM.. PSU..	VF44P 1004.	R. C.	A. B.

LIST OF ABBREVIATIONS - LISTE DES ABREVIATIONS- ABKÜRZUNGEN LISTA DELLE ABBREVIAZIONI - LISTA DE ABREVIACIONES

- **+USYS:** System voltage
- **+U_VIDEO:** Video drive voltage for the CRT board
- **+ STDBY_ ON:** Standby data (0V standby , 0.6v switched ON)
- **+5V DST:** 5v unregulated voltage from the DST to supply the tuner and audio MSP device
- **+5V ON:** 5v regulated voltage from the DST to supply the tuner and audio MSP device
- **+5V UP :** Microprocessor supply voltage
- **BCL:** Beam current limiting information
- **CVBS:** Composite video / luminance signal
- **CVBS_OUT:** Composite video output
- **CVBS_TXT:** Composite video for teletext extraction
- **DEGAUSS:** Degauss signal
- **EW :** East / West
- **FORMAT / BC:** Full white control DATA depending on 16/9 selected format
- **HDRV:** Horizontal deflection signal
- **HTR1 / HTR2:** Heater voltage from the DST to CRT PCB
- **LFB:** L ine Fast Blanking
- **MUTE :** Mutes audio amplifiers
- **PO:** “Power ON “ IP95 : reset activated and output = 8v “PO” = 5v when TV is working in normally
- **POWER_FAIL:** Detection of mains supply and deflection stage failures
- **RESET:** Microprocessor reset signal
- **SAFETY:** Safety information from the deflection stage
- **SCL:** Serial Clock
- **SDA :** Serial Data
- **SIF:** Sound IF
- **TRAP_INFO:** 31.4Mhz IF trap activation
- **U_ STANDBY:** Standby voltage
- **U_DRIVER:** Horizontal sync signal from TDA8855H
- **U_TIMER:** 11v voltage used during “Switch ON “ phase and “Wake Up“ mode
- **V FLB:** Vertical flyback reference for the microprocessor
- **V GUARD:** Safety data generated by the vertical amplifier TDA 8351
- **V_RETRACE:** 42 / 48volts (depending on tube type) generated by the DST and used for vertical blanking
- **V_SUPPLY:** 13.5 to 15.5 volts (depending on tube type) generated by the DST

INTEGRATED CIRCUITS AND TRANSISTORS OUTLINE -
CIRCUITS INTEGRES ET TRANSISTORS
INTEGRIERTE SCHALTUNGEN UND TRANSISTOREN -
CIRCUITI INTEGRATI TRANSISTOR
CIRCUITOS INTEGRADOS Y TRANSISTORES



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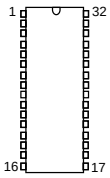

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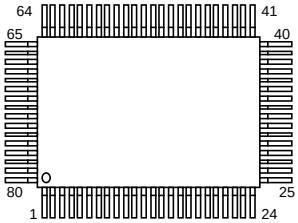

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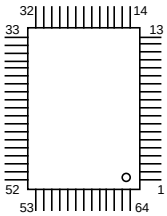

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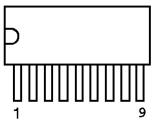

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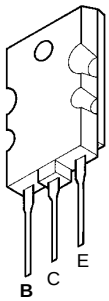

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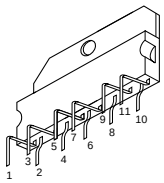

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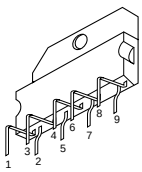

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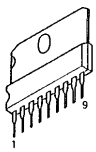

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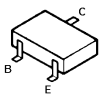

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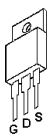

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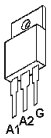
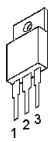
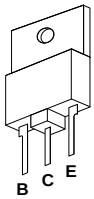


BT806 -600C



MC7812/CT



BD241C

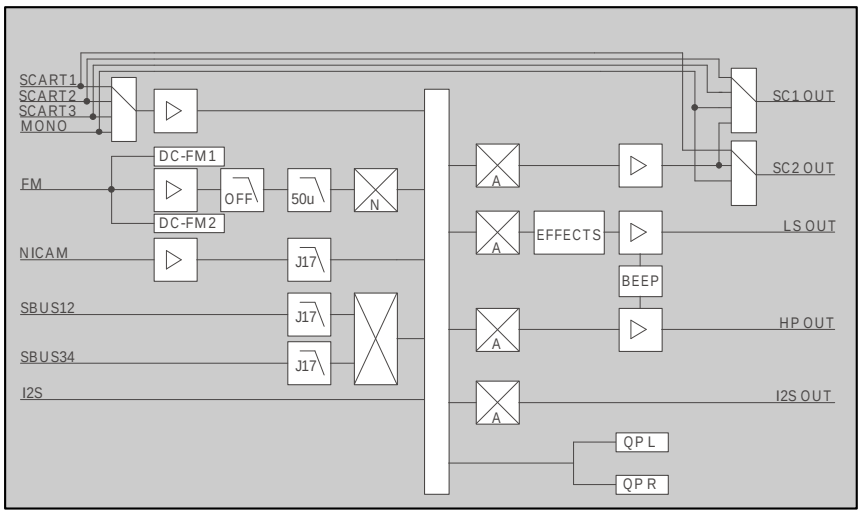
BC 337
BC 546B
BC 547B

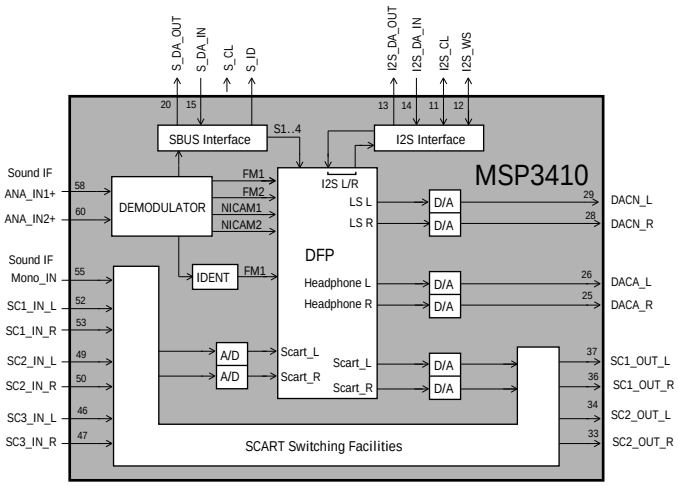
BF 422
BF423
2SA1020Y
2SC2236Y

MPS750

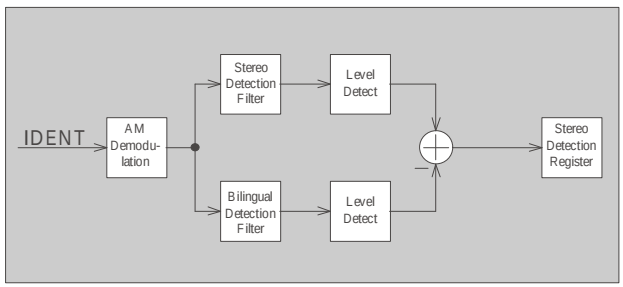
INTEGRATED CIRCUITS BLOCK DIAGRAMS - SYNOPTIQUES INTERNES DES CIRCUITS INTEGRES - INTEGRIERTE SCHALTUNGEN BLOCKSCHALTBILDER SCHEMA A BLOCCHI DEI CIRCUITI INTEGRATI - VISTA INTERNA DE LOS CIRCUITOS INTEGRADOS

Audio baseband processing of the MSP3410

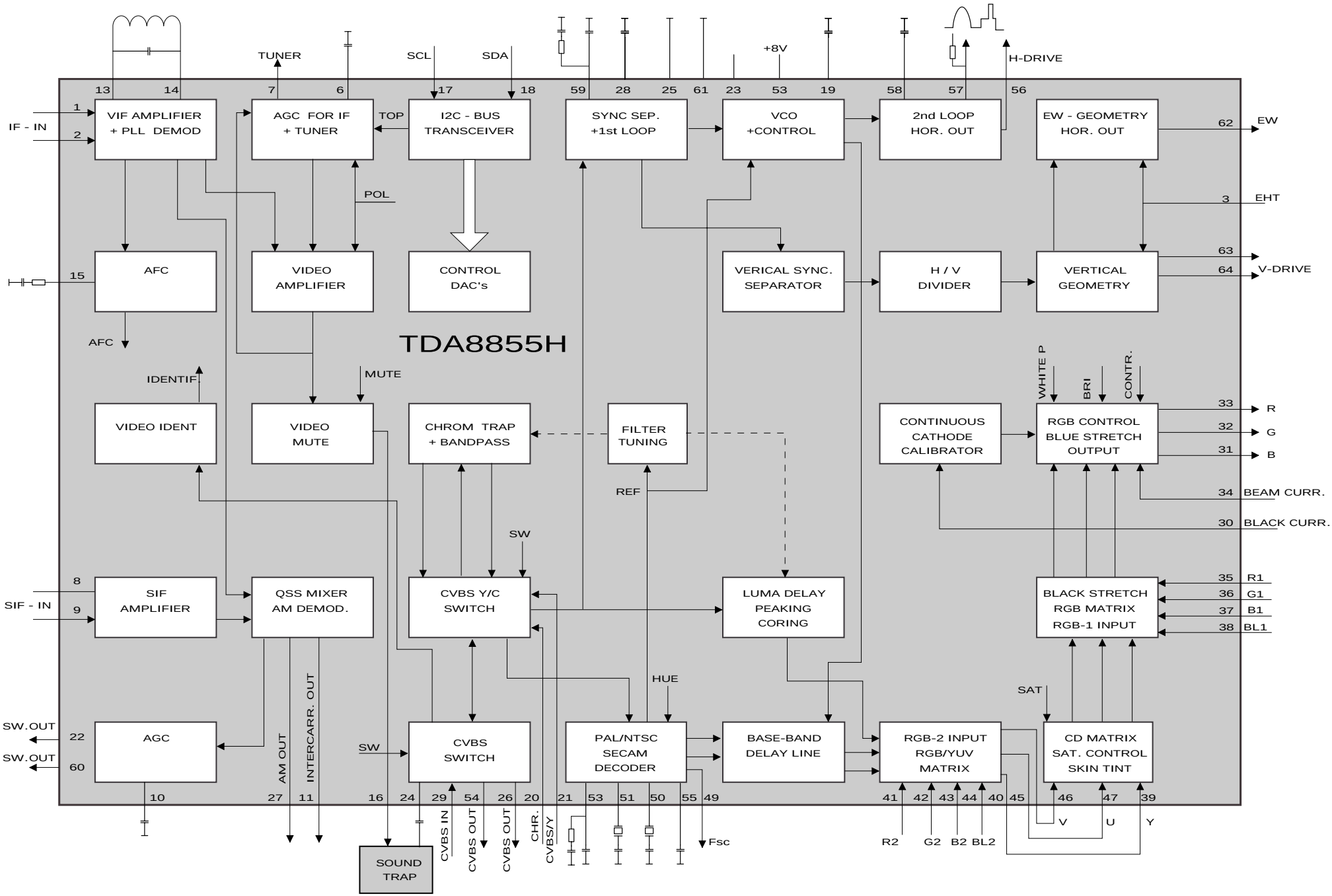




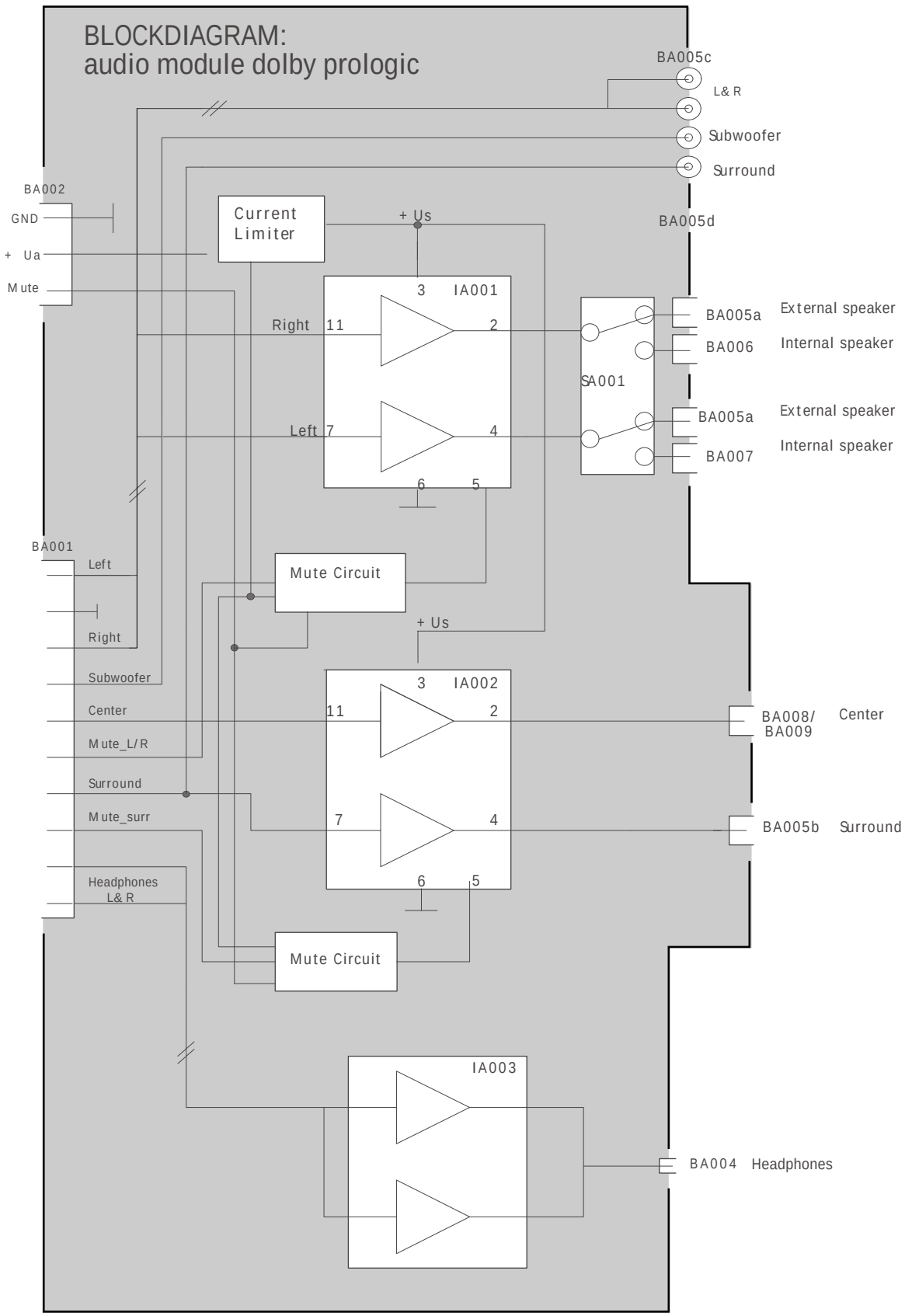
Detection part of the MSP 3410



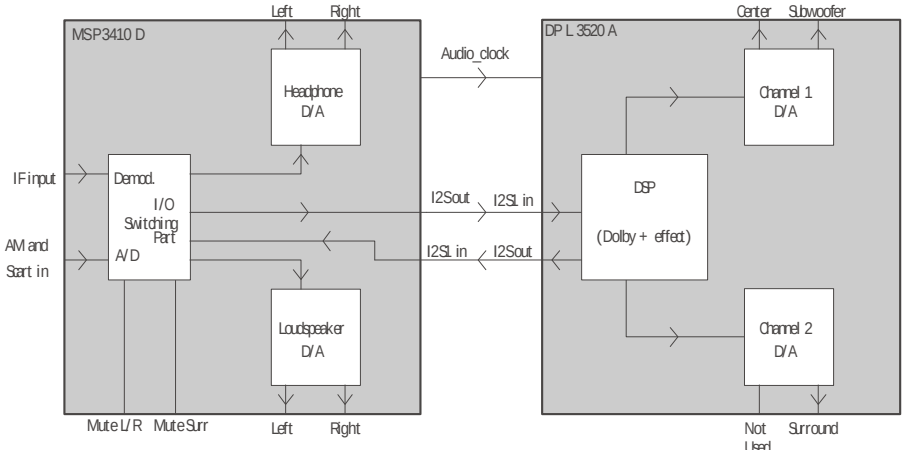
IV01 TDA 8855H



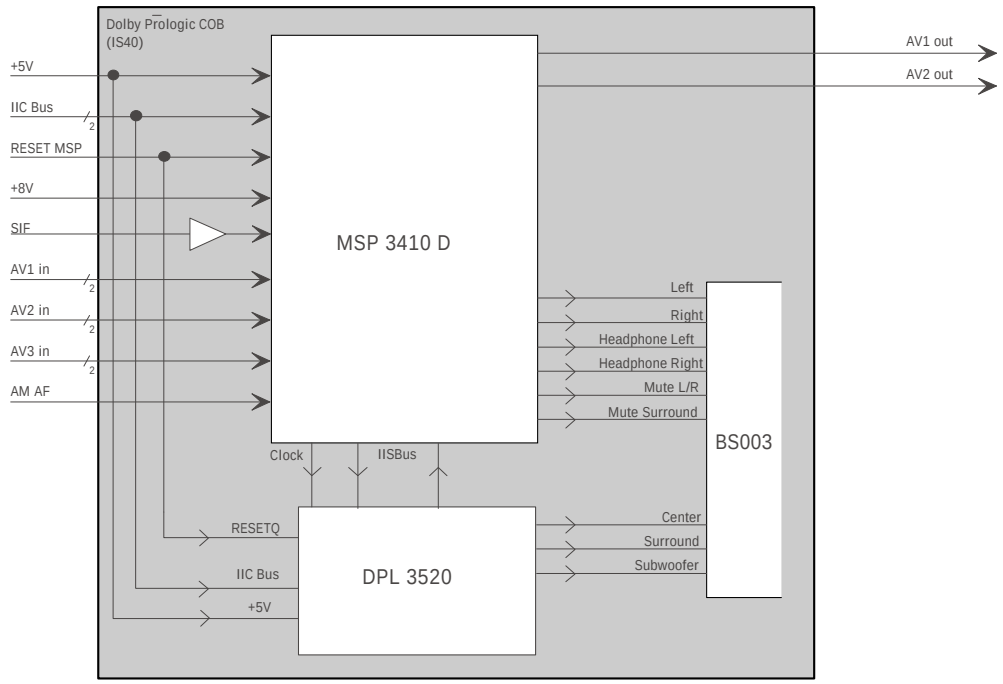
BLOCK DIAGRAM (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA SYNOPTIQUE (AUDIO MODULE DOLBY PROLOGIC)
BLOCKSCHALTBILD (AUDIO MODULE DOLBY PROLOGIC)
SCHEMA A BLOCCI (AUDIO MODULE DOLBY PROLOGIC)
ESQUEMA DE BLOQUES (AUDIO MODULE DOLBY PROLOGIC)



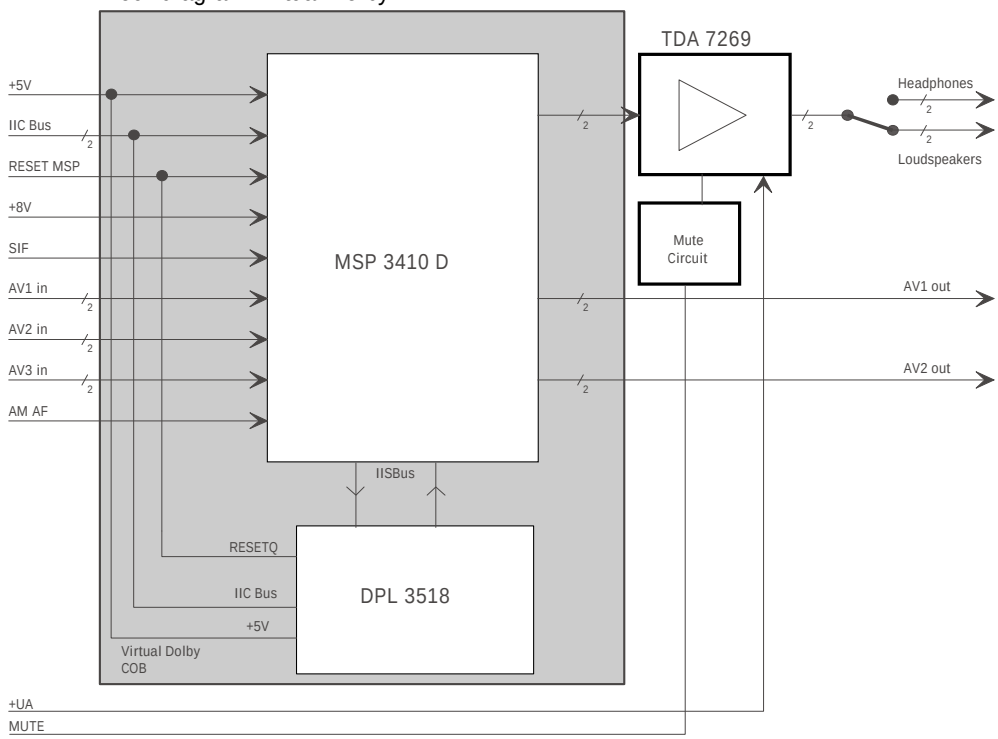
Interface requirement audio part with Dolby Prologic



Block diagram Dolby Prologic



Block diagram Virtual Dolby



IRIS REPAIR CODING SYSTEM

SYMPTOM CODE TABLE

IRIS

CONDITION CODE | MAIN SYMPTOM CODE | EXTENDED SYMPTOM CODE (*1)

1	CONSTANTLY
2	INTERMITTENTLY
3	AFTER A WHILE
4	IN A HOT ENVIRONMENT
5	IN A COLD ENVIRONMENT
6	WHEN SWITCHING
7	UNDER VIBRATION
8	IN A DAMP/WET ENVIRONMENT
9	IN A DRY ENVIRONMENT
A	AFTER BEING DROPPED
B	AFTER LIGHTNING STRIKE
C	ONLY CERTAIN STATION(S)/SOFTWARE/ MODE
D	ONLY ON CERTAIN STANDARDS
E	ONLY ON ONE CHANNEL
F	ONLY WITH CERTAIN INPUT(S)
G	ONLY ON CERTAIN OUTPUT(S)
H	IN STANDBY/OFF MODE
J	AT EDIT POINT
K	WHEN INTERCONNECTED
L	LIQUID CONTAMINATION
X	NO SYMPTOM OR PROBLEM FOUND

(*1)
CAUTION
THE 'X' EXTENDED SYMPTO CODES (*-**X) SHOUL ONLY BE USED TO INDICATE THAT A SUITABLE SYMPTOM DESCRIPTION IS NOT AVAILABLE IN THE CONCERNED SYMPTOM GROUP

		1	NO ACTION	2	LEVEL	3	QUALITY	4	NOISE	5	UNSTABLE	6	RECORDING & PHYSICAL PROBLEMS	7	SPECIAL FUNCTIONS	8	OTHER CONDITIONS
1	GENERAL	**110**	**POWER PROBLEM** 111 NO POWER ON AC 112 NO POWER WHEN USING AC-ADAPTER 113 NO POWER WHEN USING DRY BATTERIES 114 NO POWER WHEN USING RECHARGEABLE BATTERIES 115 NO POWER FROM SOLAR CELL 116 NO POWER WHEN USING A CAR BATTERY 117 SHORT OPERATION TIME/SHORT BATTERY LIFE 118 POWER-OFF FUNCTION NOT WORKING 119 NO SWITCH-ON FROM STANDBY 11A POWERS UP, BUT NO OPERATION 11B CYCLIC POWER ON/OFF 11X OTHER POWER PROBLEM	**120**	**CHARGING PROBLEM** 121 NO BATTERY CHARGING 122 INCOMPLETE BATTERY CHARGE 12X OTHER CHARGING PROBLEM	**130**	**DISPLAY FUNCTION PROBLEM** 131 FAULTY TIMER/COUNTER DISPLAY 132 FAULTY LAMP/LED OPERATION 133 FAULTY LEVEL METER OPERATION 134 FAULTY ON-SCREEN DISPLAY OPERATION 135 ELECTRONIC TUNING DISPLAY FAULT 136 MECHANICAL TUNING DISPLAY FAULT 137 FAULTY TIME CODE DISPLAY 138 FAULTY ALARM/ERROR DISPLAY 139 DISPLAY DIM 13X OTHER DISPLAY FUNCTION PROBLEM	**140**	**ABNORMAL NOISE** 141 CRT DISCHARGING NOISE 142 EHT DISCHARGING NOISE 143 NOISY CABINET 144 NOISY TRANSFORMER 145 NOISY COMPONENT(S) 146 RATTLE 14X OTHER ABNORMAL NOISE	**150**	**REMOTE CONTROL PROBLEM** 151 NO REMOTE CONTROL OPERATION 152 INCORRECT REMOTE CONTROL OPERATION 153 REMOTE CONTROL PROGRAMMING/ LEARNING MODE PROBLEM 154 POOR REMOTE CONTROL SENSITIVITY 15X OTHER REMOTE CONTROL PROBLEM	**160**	**PHYSICAL DAMAGE** 161 DAMAGED CABINET 162 DAMAGED HANDLE 163 DAMAGED CONTROL KNOB(S)/BUTTON(S) 164 DAMAGED DOOR/COVER 165 DAMAGED SEAL 166 DAMAGED PLUG OR SOCKET 167 DAMAGED LENS 168 DAMAGED CARTRIDGE OR STYLUS 169 DAMAGED ANTENNA 16A DAMAGED CRT OR VIEWFINDER 16B MISSING COMPONENT(S) OR ORNAMENTAL PARTS 16C PRINTED MARKINGS ERASED/PEELED OFF 16X OTHER PHYSICAL DAMAGE	**170**	**GENERAL FUNCTION PROBLEM** 171 FAULTY CLOCK FUNCTION 172 FAULTY SLEEP FUNCTION 173 FAULTY TIMER PROGRAMMING 174 FAULTY TIMER RECORDING 175 SOFTWARE PROGRAMMING PROBLEM 176 FAULTY RECORD MUTE OPERATION 177 FAULTY PROGRAMMED PLAYBACK OPERATION 178 FAULTY MEMORY FUNCTION 17X OTHER GENERAL FUNCTION PROBLEM	**180**	**SPECIAL REQUIREMENTS** 181 TEST AND CHECK 182 GENERAL OVERHAUL 183 SYSTEM/FREQUENCY CONVERSION 184 INITIAL SETUP REQUESTED 185 MODIFICATION/CIRCUIT CHANGE 186 WRONG SET IN CARTON 18X OTHER SPECIAL REQUIREMENTS 18Z SYMPTOM NOT AVAILABLE
2	COMMUNICATION	**210**	**NO RECEPTION** 211 NO AM RECEPTION 212 NO FM RECEPTION 213 NO SW RECEPTION 214 NO VHF RECEPTION 215 NO UHF RECEPTION 216 NO BS RECEPTION 217 NO CS RECEPTION 218 NO HDTV RECEPTION 219 NO QPS RECEPTION 21X OTHER 'NO RECEPTION' PROBLEM	**220**	**POOR RECEPTION** 221 POOR AM RECEPTION 222 POOR FM RECEPTION 223 POOR SW RECEPTION 224 POOR VHF RECEPTION 225 POOR UHF RECEPTION 226 POOR BS RECEPTION 227 POOR CS RECEPTION 228 POOR HDTV RECEPTION 229 POOR QPS RECEPTION 22X OTHER 'POOR RECEPTION' PROBLEM	**230**	**TRANSMISSION PROBLEM** 231 NO TRANSMISSION 232 POOR TRANSMISSION 233 TRANSMISSION LEVEL TOO HIGH 234 NO TRANSMISSION BETWEEN BASE UNIT AND HANDSET 235 POOR TRANSMISSION BETWEEN BASE UNIT AND HANDSET 23X OTHER TRANSMISSION PROBLEM	**240**	**NOISY RECEPTION/ TRANSMISSION** 241 LINE NOISE 242 OSCILLATION 243 INTERSTATION INTERFERENCE 24X OTHER NOISE RECEPTION/TRANSMISSION PROBLEM	**250**	**UNSTABLE RECEPTION/ TRANSMISSION** 251 TUNING DRIFT 252 FADING 25X OTHER UNSTABLE RECEPTION/ TRANSMISSION PROBLEM	**260**	**TUNING PROBLEM** 261 MANUAL TUNING PROBLEM 262 AUTOMATIC TUNING PROBLEM 263 INCORRECT TUNING 264 TUNING MEMORY PROBLEM 26X OTHER TUNING PROBLEM	**270**	**SPECIAL COMMUNICATION PROBLEM** 271 FAULTY DIALLING 272 FAULTY CHANNEL SELECTION 273 FAULTY AUTO-ANSWER OPERATION 274 FAULTY MESSAGE READ-OUT FUNCTION 275 FAULTY AUTODIAL MEMORY 276 FAULTY SPEECH PROCESSING 277 NO RINGING TONE 278 WEAK RINGING TONE 27X OTHER SPECIAL COMMUNICATION PROBLEM	**280**	**SPECIAL RECEPTION PROBLEM** 281 FAULTY STEREO RECEPTION 282 FAULTY MAIN CHANNEL (A) FUNCTION 283 FAULTY SUB-CHANNEL (B) FUNCTION 284 FAULTY SSB RECEPTION 285 FAULTY RDS/VPS OPERATION 286 FAULTY TELETEXT RECEPTION 287 FAULTY SATELLITE/RTTY RECEPTION 288 FAULTY FAX OPERATION 28X OTHER SPECIAL RECEPTION PROBLEM
3	PICTURE	**310**	**NO PICTURE** 311 NO PICTURE IN E TO E MODE 312 NO PICTURE IN PLAYBACK MODE 313 NO PICTURE IN VIEWFINDER 314 NO PICTURE, ONLY RASTER 315 NO RASTER, BLACK PICTURE 316 ONLY HORIZONTAL LINE 317 ONLY VERTICAL LINE 31X OTHER 'NO PICTURE' PROBLEM	**320**	**PICTURE LEVEL PROBLEM** 321 PICTURE TOO DARK 322 PICTURE TOO BRIGHT 323 CONTRAST TOO LOW 324 CONTRAST TOO HIGH 325 SATURATED WHITE OR BLACK LEVEL 326 SHADING ON PICTURE 327 ONLY PARTIAL PICTURE 32X OTHER PICTURE LEVEL PROBLEM	**330**	**PICTURE QUALITY PROBLEM** 331 POOR PICTURE RESOLUTION 332 POOR FOCUS 333 RINGING ON PICTURE 334 EXCESSIVE SMEAR/LAG 335 POOR LINEARITY OR GEOMETRY 336 PICTURE SIZE INCORRECT 337 INCORRECT CENTRING OF PICTURE 338 PICTURE SLANTED 339 V-SIZE INCORRECT 33A H-SIZE INCORRECT 33X OTHER PICTURE QUALITY PROBLEM	**340**	**PICTURE NOISE** 341 SNOWY PICTURE 342 DOT NOISE OR DROPOUT ON PICTURE 343 NOISE BARS ON PICTURE 344 BLANKING LINES ON PICTURE 345 BEATING O PICTURE 346 GHOSTING ON PICTURE 347 VCR HEAD SWITCHING NOISE ON PICTURE 348 OVERMODULATION NOISE 34X OTHER PICTURE NOISE PROBLEM	**350**	**UNSTABLE PICTURE** 351 SYNC PROBLEM 352 PICTURE PUMPING 353 PICTURE JITTER 354 PICTURE SHAKING (HORIZONTAL OR VERTICAL) 355 FLICKERING PICTURE 356 FLASHING PICTURE 357 CYCLIC PICTURE MUTING 358 HEAD IMPACT ERROR CAUSING UNSTABLE PICTURE 359 VCR SKEW ERROR 35A FROZEN PICTURE 35B JUMPING/REPEATING PICTURE 35X OTHER 'UNSTABLE PICTURE' PROBLEM	**360**	**POOR PICTURE RECORDING** 361 NO PICTURE RECORDING 362 NO ERASURE PROTECTION FOR VIDEO 363 PREVIOUS VIDEO RECORDING NOT BEING ERASED 364 UNWANTED ERASURE OF PICTURE 365 NO CAMERA RECORDING 366 ONLY ONE FIELD PER FRAME BEING RECORDED 36X OTHER PICTURE RECORDING PROBLEM	**370**	**SPECIAL PICTURE FUNCTION PROBLEM** 371 EDITING PROBLEM 372 FAULTY FADING/WIPER OPERATION 373 FAULTY NEGATIVE/POSITIVE SWITCHING FUNCTION 374 FAULTY SUPERIMPOSE/TELOP OPERATION 375 FAULTY PICTURE IN PICTURE/DIGITAL PICTURE OPERATION 376 FAULTY PICTURE TRANSMISSION 377 FAULTY DIGITAL SHUTTER FUNCTION 378 FAULTY GENLOCK FUNCTION 379 FAULTY FLASH/STROBE FUNCTION 37A FAULTY DIGITAL PICTURE FUNCTION 37B FAULTY AUTO-EDIT FUNCTION 37X OTHER SPECIAL PICTURE FUNCTION PROBLEM	**380**	**PICTURE DISPLAY/PICKUP PROBLEM** 381 BURN MARK ON DISPLAY/PICKUP 382 SCRATCH ON DISPLAY/PICKUP 383 DUST/DIRT ON DISPLAY/PICKUP 384 PHOSPHOR/PIXEL MISSING ON DISPLAY/PICKUP 385 BRIGHT POINT(S) IN PHOSPHOR/PIXEL 38X OTHER PICTURE DISPLAY/PICKUP PROBLEM
4	COLOUR	**410**	**NO COLOUR** 411 NO COLOUR IN E TO E MODE 412 NO COLOUR IN PLAYBACK MODE 413 NO COLOUR IN VIEWFINDER 414 NO COLOUR IN PART OF PICTURE 41X OTHER 'NO COLOUR' PROBLEM	**420**	**COLOUR LEVEL PROBLEM** 421 WEAK COLOUR 422 EXCESSIVE COLOUR 42X OTHER COLOUR LEVEL PROBLEM	**430**	**POOR COLOUR QUALITY** 431 SOME OR ALL COLOURS MISSING 432 POOR WHITE BALANCE 433 HUE PROBLEM 434 PURITY ERROR 435 LANDING ERROR 436 CONVERGENCE ERROR 437 REGISTRATION ERROR 438 PITCH MOIR... 43X OTHER COLOUR QUALITY PROBLEM	**440**	**NOISY COLOUR** 441 COLOUR NOISE ON A BLACK & WHITE PICTURE 442 COLOUR STREAKING 44X OTHER COLOUR NOISE PROBLEM	**450**	**UNSTABLE COLOUR** 451 COLOUR FLASHING 452 HUE CONSTANTLY CHANGING 453 FLICKERING COLOUR 454 COLOUR NOT LOCKED 45X OTHER UNSTABLE COLOUR PROBLEM	**460**	**POOR COLOUR RECORDING** 461 NO COLOUR RECORDING 46X OTHER COLOUR RECORDING PROBLEM	**470**	**SPECIAL COLOUR FUNCTION PROBLEM** 471 FAULTY AUTOMATIC WHITE BALANCE 472 FAULTY COLOUR EFFECTS FUNCTION 47X OTHER SPECIAL COLOUR FUNCTION PROBLEM	**480**	
5	AUDIO	**510**	**NO AUDIO** 511 NO SOUND IN E TO E MODE 512 NO PLAYBACK OF OUTGOING MESSAGE(S) 513 NO PLAYBACK OF INCOMING MESSAGE(S) 51X OTHER 'NO AUDIO' PROBLEM	**520**	**AUDIO LEVEL PROBLEM** 521 LOW AUDIO LEVEL 522 EXCESSIVE AUDIO LEVEL 523 BALANCE PROBLEM 524 FADER PROBLEM 525 AUDIO LEVEL REMAINING 52X OTHER AUDIO LEVEL PROBLEM	**530**	**AUDIO QUALITY** 531 POOR FREQUENCY RESPONSE 532 DISTORTED AUDIO 533 NO OR POOR TREBLE 534 NO OR POOR BASS 53X OTHER AUDIO QUALITY PROBLEM	**540**	**NOISY AUDIO** 541 HUM 542 HISS 543 CROSSTALK 544 STATIC, POP OR CLICK NOISE 545 BUZZ 546 SCRATCHING NOISE 547 IGNITION NOISE 548 MULTIPATH NOISE 54X OTHER AUDIO NOISE PROBLEM	**550**	**UNSTABLE AUDIO** 551 JUMPING OR REPEATING AUDIO 552 AUDIO PUMPING OR BREATHING 553 AUDIO DROPOUTS 554 CYCLIC AUDIO MUTING 555 WOW AND FLUTTER 556 HOWLING/ACOUSTIC FEEDBACK 55X OTHER UNSTABLE AUDIO PROBLEM	**560**	**POOR AUDIO RECORDING** 561 AUDIO NOT BEING RECORDED 562 NO ERASURE PROTECTION FOR AUDIO 563 PREVIOUS AUDIO RECORDING NOT BEING ERASED 564 UNWANTED ERASURE OF AUDIO 565 MESSAGE NOT BEING RECORDED 56X OTHER AUDIO RECORDING PROBLEM	**570**	**POOR SPECIAL AUDIO FUNCTION** 571 FAULTY FADE OPERATION 572 FAULTY ECHO OPERATION 573 FAULTY MIXING OPERATION 574 FAULTY REPEAT MODE OPERATION 575 FAULTY AUDIO PROCESSING 576 FAULTY SYNC RECORDING OPERATION 577 FAULTY DBB/DOL OPERATION 578 FAULTY NOISE REDUCTION OPERATION 57X OTHER SPECIAL AUDIO FUNCTION PROBLEM	**580**	**STEREO/MULTI MODE OPERATION PROBLEM** 581 NO STEREO OPERATION 582 POOR CHANNEL SEPARATION 583 DIFFERENCE IN PHASE BETWEEN CHANNELS 584 PROBLEM WITH SURROUND SOUND MODE 585 PROBLEM WITH PCM AUDIO MODE 58X OTHER STEREO/MULTI MODE PROBLEM
6	MECHANISM	**610**	**NO MECHANICAL OPERATION** 611 NO DISC ROTATION 612 NO FORWARD OPERATION 613 NO REVERSE OPERATION 614 NO FAST FORWARD OR REWIND FUNCTION 615 NO LOADING 616 NO UNLOADING OR EJECTING OF TAPE 617 NO AUTO SHUT-OFF OPERATION 618 TONEARM DOES NOT MOVE 619 DISC NOT BEING EJECTED 61A MAGAZINE DOES NOT EJECT 61X OTHER 'NO MECHANICAL OPERATION' PROBLEM	**620**	**IRREGULAR MECHANICAL OPERATION** 621 IRREGULAR ROTATION 622 IRREGULAR FORWARD MODE 623 IRREGULAR REVERSE OPERATION 624 IRREGULAR FAST FORWARD OR REWIND FUNCTION 625 IRREGULAR LOADING 626 IRREGULAR UNLOADING OR EJECTING OF TAPE 627 IRREGULAR AUTO SHUT-OFF OPERATION 628 IRREGULAR TONEARM MOVEMENT 629 IRREGULAR EJECTION OF DISC 62A IRREGULAR DIRECTION CHANGE 62X OTHER 'IRREGULAR MECHANICAL OPERATION' PROBLEM	**630**	**SPEED PROBLEM** 631 SPEED TOO FAST 632 SPEED TOO SLOW 63X OTHER SPEED PROBLEM	**640**	**MECHANICAL NOISE** 641 ROTATION NOISE 642 MOTOR NOISE 643 WIND NOISE 644 TAPE SQUEALING 645 FAN NOISE 646 DISC SCRAPING 647 NOISY TAPE LOADING 64X OTHER MECHANICAL NOISE PROBLEM	**650**		**660**	**DAMAGE TO SOFTWARE** 661 TAPE GETS SCRATCHED 662 DISC GETS SCRATCHED 663 TAPE GETS CHEWED/WRINKLED 664 TAPE JAMMED OR BROKEN 665 TAPE GETS CURLED 666 SLACK TAPE 667 TAPE STICKING 66X OTHER SOFTWARE DAMAGE PROBLEM	**670**	**MECHANICAL OPERATION PROBLEM** 671 FAULTY START/STOP OPERATION 672 FAULTY PAUSE OPERATION 673 FAULTY AUTOMATIC PROGRAM SEARCH 674 FAULTY CUE/REVIEW MODE 675 FAULTY SLOW MOTION OPERATION 676 FAULTY HIGH-SPEED SCANNING MODE 677 FAULTY SPEED COPY FUNCTION 678 FAULTY REPEAT OPERATION 679 FAULTY RECORD REVIEW MODE 67A FAULTY AMS OPERATION 67X OTHER MECHANICAL OPERATION PROBLEM	**680**	**LENS PROBLEM** 681 FOCUS PROBLEM 682 ZOOM PROBLEM 683 IRIS PROBLEM 684 MACRO PROBLEM 68X OTHER LENS PROBLEM
7	DATA PROCESSING	**710**	**NO DATA PROCESSING** 711 NO INITIAL SCREEN 712 SYSTEM DOES NOT RESET 713 SYSTEM DOES NOT BOOT UP 714 NO OPERATION FROM PLUG-IN MODULE 715 NO KEYBOARD OPERATION 716 NO OPERATION FROM OTHER INPUT/OUTPUT 717 NO DATA STORAGE OPERATION 718 NO DATA COMMUNICATION 71X OTHER 'NO DATA PROCESSING' PROBLEM	**720**	**FAULTY DATA PROCESSING OPERATION** 721 INCORRECT DATA 722 SYSTEM RESET WHILE BEING USED 723 SYSTEM LOCKS OUT/CRASHES 724 FAULTY OPERATION OF PLUG-IN MODULE 725 FAULTY KEYBOARD OPERATION 726 FAULTY OPERATION OF OTHER INPUT/OUTPUT 727 FAULTY DATA STORAGE OPERATION 728 FAULTY DATA COMMUNICATION 72X OTHER 'FAULTY DATA PROCESSING' PROBLEM	**730**	**DATA DISPLAY PROBLEM** 731 INCORRECT CHARACTER DISPLAY 732 MISSING DISPLAY CHARACTERS 733 FAULTY GRAPHIC DISPLAY 734 FAULTY SWITCHING BETWEEN GRAPHIC/ CHARACTER MODE 735 FAULTY PROMPT/CURSOR OPERATION 736 DATA DISPLAY COLOUR INCORRECT 737 NO PAGING OR SCROLL MODE 73X OTHER DATA DISPLAY PROBLEM	**740**		**750**		**760**	**DATA READ/WRITE PROBLEM** 761 FORMATTING PROBLEM 762 DATA ON STORAGE MEDIUM BEING LOST 763 FRAME MEMORY PROBLEM 76X OTHER DATA READ/WRITE PROBLEM	**770**	**SPECIAL DATA PROCESSING** 771 FAULTY SELF-DIAGNOSTIC MODE 772 FAULTY WORD PROCESSING FUNCTION 773 FAULTY GRAPHIC EDIT FUNCTION 77X OTHER 'SPECIAL DATA FUNCTION' PROBLEM	**780**	
8	PRINTING	**810**	**NO PRINTER OPERATION** 811 NOT PRINTING 812 NO COMMUNICATION WITH PRINTER 813 PAPER NOT LOADING 814 NO PAPER FEED 815 NO IMAGE FIXATION 81X OTHER NO PRINTER OPERATION PROBLEM	**820**	**ERRONEOUS PRINTER OPERATION** 821 PRINT IMAGE REVERSED (NEGATIVE/ POSITIVE) 822 IRREGULAR PAPER FEED 823 ERRONEOUS PRINT MODE SWITCHING 82X OTHER PRINTER OPERATION PROBLEM	**830**	**POOR PRINT QUALITY** 831 INCORRECT PRINTING POSITION 832 LOW PRINT CONTRAST 833 EXCESSIVE PRINT CONTRAST 834 BLURRED PRINT IMAGE 835 PRINT IMAGE NOT SHARP 836 DOTS MISSING-IN PRINT IMAGE 83X OTHER PRINT QUALITY PROBLEM	**840**	**NOISY PRINTING** 841 PRINTING NOISE LINES 842 DIRTY PRINTING 84X OTHER NOISY PRINTING PROBLEM	**850**	**UNSTABLE PRINTER OPERATION** 851 UNSTABLE PAPER LOADING 852 UNSTABLE MULTI-PAPER LOADING 853 INCORRECT LINE-UP OF CHARACTERS 85X OTHER UNSTABLE PRINTER OPERATION PROBLEM	**860**	**RIBBON/PAPER PROBLEMS** 861 RIBBON BROKEN 862 RIBBON STUCK/STICKING 863 RIBBON DERAILED 864 PAPER STUCK/STICKING TO MECHANISM 865 PAPER JAM 86X OTHER RIBBON/PAPER PROBLEM	**870**		**880**	**FAULTY FONT/CHARACTER FUNCTIONS** 881 INCORRECT CHARACTERS 882 INCORRECT CHARACTER SIZE 883 FONT LOADING PROBLEM 88X OTHER FAULTY FONT/CHARACTER FUNCTION PROBLEM

SECTION CODES

ANT	ANTENNA SECTION
APA	AUDIO PROCESSING/ANALOG
APD	AUDIO PROCESSING/DIGITAL
APR	SIGNAL PROCESSING (ANALOG)
ARM	ARM MECHANISM
BCH	BATTERY CHARGE
BZL	BEZEL
CBT	CABINET
CHA	CHASSIS
CLK	CLOCK/TIMER SECTION
CPA	COLOUR PROCESSING/ANALOG
CPD	COLOUR PROCESSING/DIGITAL
CRT	PICTURE TUBE
CTR	CONTROL PANEL
DDM	DISC DRIVE MECHANISM
DFL	DEFLECTION CIRCUIT
DPR	SIGNAL PROCESSING (DIGITAL)
ERA	ERASE CIRCUIT
EXC	EXTERNAL CONNECTOR
FDD	FLOPPY DISC DRIVE
FLX	FLEXIBLE PCB
FMW	FIRMWARE
FPK	FOCUS PACK
HCM	HEAD CARRIAGE MECHANISM

HDD	HARD DISC DRIVE
HFS	HIGH FREQUENCY SECTION (RF)
HOL	CASSETTE HOLDER
IDS	INFORMATION DISPLAY SECTION
IFC	IF-CIRCUIT
IMG	IMAGE DISPLAY UNIT
INC	INTERNAL CONNECTOR
INP	SIGNAL INPUT SECTION
KBD	KEYBOARD (SEPARATE)
LDG	LOADING MECHANISM
LNM	LENS MECHANISM
MEM	MEMORY CIRCUIT
MIC	MICROPHONE SECTION
OUT	SIGNAL OUTPUT SECTION
PFM	PAPER FEED MECHANISM
PIN	PINCH ROLLER/LEVER
PRG	PROGRAMMING SECTION
PRI	PRINT BLOCK
PRT	PROTECTION CIRCUIT
PSU	POWER SUPPLY
PUD	PICK-UP DEVICE
PWA	POWER AMP SECTION
REM	REMOTE CONTROL SECTION
RFM	RIBBON FEED MECHANISM

RFU	BOOSTER/RF UNIT
RHD	ROTARY HEAD(S)
SFT	SOFTWARE (TAPE, DISC, ETC.)
SHD	STATIONARY HEAD(S)
SLD	SLED MECHANISM
SNS	SENSOR UNIT
SPK	SPEAKER
SRS	SUPPLY REEL SECTION
STA	STATIC BLOCK
SVO	SERVO SECTION
SYS	SYSTEM CONTROL SECTION
TDM	TAPE DRIVE MECHANISM
THR	THREADING MECHANISM
TIM	TIMER SECTION
TNR	TENSION REGULATOR
TPT	TAPE PATH
TRS	TAKE-UP REEL SECTION
TUN	TUNING SECTION
TXT	TEXT PROCESSING
VPA	VIDEO PROCESSING/ANALOG
VPD	VIDEO PROCESSING/DIGITAL
VWF	VIEWFINDER
WIR	LEAD WIRE
XXX	CABINET/COSMETIC PARTS

DEFECT CODES

MECHANICAL		ELECTRICAL	
A	WORN OUT	N	EXHAUSTED, LOW EMISSION
B	DIRTY, CLOGGED	O	BURNT, ARCING, MISSING PIXELS
C	MISALIGNED	P	MISALIGNED
D	CUT, BROKEN	Q	SHORT
E	DEFORMED	R	OPEN
F	SNAPPED	S	LEAKING
G	SCRATCHED	T	BAD CONTACT, CONNECTION
H	CRACKED, PEELED, CORRODED	U	OPEN PATTERN
I	LOOSE	V	CRACKED PCB
J	SHAKY, UNSTABLE	W	COLD OR NO SOLDERING
K	LEAKING	X	BRIDGED SOLDERING
L	DRY (NO LUBRICANT)	Y	WRONG COMPONENT
M	FOREIGN OBJECT	Z	MISSING COMPONENT
		1	SOFTWARE BUG

REPAIR CODES

A	REPLACEMENT	N	MAINTENANCE
B	MECHANICAL ALIGNMENT	O	REFURBISHING
C	ELECTRICAL ALIGNMENT	P	PREVENTIVE PARTS REPLACEMENT
D	RESOLDERING	Q	PREVENTIVE ACTION WITHOUT PARTS REPLACEMENT
E	CLEANING	U	EXPLANATION FOR CUSTOMER
F	LUBRICATION	V	ESTIMATION REFUSED
G	REPAIRED ELECTRICAL PARTS	W	ESTIMATION WITH PARTS
H	REPAIRED MECHANICAL PARTS	X	ESTIMATION WITHOUT PARTS
I	S/B MODIFICATION		
J	REMOVED COMPONENT (S)		
K	ADDED COMPONENTS	Y	RETURN WITHOUT REPAIR
L	FUNCTIONAL CHECK	Z	SET EXCHANGE
M	SPECIFICATION MEASUREMENT		

FLAG: INDICATES THE ONE MAJOR SYMPTOM/PART COMBINATION BY '1'

EXAMPLE OF USE :

FLAG	SYMPTOM CODE	PART NO	REF. NO	SECTION/PCB	DEFECT CODE	REPAIR CODE	QTY
1	1412	1111111111	R123.	YA22.	R	A	1
.	3641	3456789XX	111..	TDM..	C	B	0

CÓDIGOS DE SECCIÓN

ANT	SECCIÓN DE LA ANTENA
APA	PROCESADO DE AUDIO ANALÓGICO
APD	PROCESADO DE AUDIO DIGITAL
APR	PROCESADO DE SEÑALES (ANALÓGICO)
ARM	MECANISMO DEL BRAZO
BCH	CARGA DE BATERÍA
BZL	CARÁTULA
CBT	MUEBLE
CHA	CHASIS
CLK	SECCIÓN DE RELOJ
CPA	PROCESADO DE COLOR ANALÓGICO
CPD	PROCESADO DE COLOR DIGITAL
CRT	TUBO DE IMAGEN
CTR	PANEL DE CONTROL
DDM	SECCIÓN DE ACCIONAMIENTO DEL DISCO
DFL	CIRCUITO DE DEFLEXIÓN
DPR	PROCESADO DE SEÑALES (DIGITAL)
ERA	CIRCUITO DE BORRADO
EXC	CONECTOR EXTERNO
FDD	EXCITADOR DEL FLOPPY DISC
FLX	PLACA FLEXIBLE
FMW	PROGRAMACIÓN FIJA
FPK	CONJUNTO DE ENFOQUE
HCM	MECANISMO DE SOPORTE DE LA CABEZA
HDD	EXCITADOR DEL DISCO DURO
HFS	SECCIÓN DE ALTA FRECUENCIA
HOL	SOPORTE DE CASSETTE
IDS	SECCIÓN DEL DISPLAY DE INFORMACIÓN
IFC	CIRCUITO FI
IMG	UNIDAD DE VISUALIZACIÓN DE IMÁGENES
INC	CONECTOR INERNO
INP	SECCIÓN DE ENTRADA DE SEÑALES
KBD	TECLADO
LDG	MECANISMO DE CARGA
LNM	MECANISMO DE LENTE
MEM	SECCIÓN DE MEMORIA
MIC	SECCIÓN DE MICRÓFONO
OUT	SECCIÓN DE SALIDA DE SEÑALES
PFM	MECANISMO DE ALIMENTACIÓN DEL PAPEL
PIN	RODILLO/PALANCA DE APRIETE
PRG	SECCIÓN DE PROGRAMACIÓN
PRI	BLOQUE DE IMPRESOR
PRT	CIRCUITO DE PROTECCIÓN
PSU	ALIMENTACIÓN
PUD	DISPOSITIVO CAPTADOR
PWA	SECCIÓN DEL AMP DE POTENCIA
REM	SECCIÓN DEL CONTROL REMOTO
RFM	MECANISMO DE ALIMENTACIÓN DE LA CINTA
RFU	AMPLIFICADOR/UNIDAD RF
RHD	CABEZAS ROTATIVAS
SFT	SOFTWARE (CINTA, DISCO, ETC)
SHD	CABEZAS FIJAS
SLD	MECANISMO DE SEGUIMIENTO
SNS	UNIDAD DE DETECCIÓN
SPK	ALTAVOZ
SRS	SECCIÓN DEL CARRETE DE SUMINISTRO
STA	BLOQUE ESTÁTICO
SVO	SECCIÓN DE SERVO
SYS	SECCIÓN DEL SISTEMA DE CONTROL
TDM	MECANISMO DE ACCIONAMIENTO DE LA CINTA
THR	MECANISMO DE ENHEBRADO
TIM	SECCIÓN DE TEMPORIZACIÓN
TNR	REGULADOR DE LA TENSIÓN DE LA CINTA
TPT	CAMINO DE LA CINTA
TRS	SECCIÓN DEL CARRETE DE RECOGIDA
TUN	SECCIÓN DE SINTONIZACIÓN
TXT	PROCESADO DE TEXTOS
VPA	PROCESADO DE VIDEO ANALÓGICO
VPD	PROCESADO DE VIDEO DIGITAL
VWF	VISOR
WIR	CABLE
XXX	PIEZAS ESTÉTICAS

CÓDIGOS DE LOS DEFECTOS

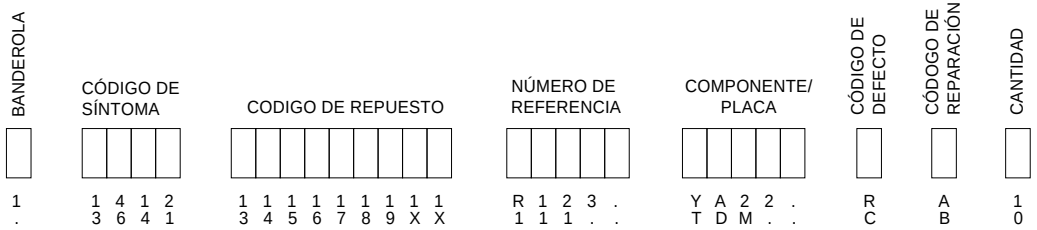
MECÁNICO		ELÉCTRICO	
A	GASTADO	N	AGOTADO, EMISIÓN DÉBIL
B	SUCIO, MANCHADO	O	QUEMADO, FORMACIÓN DE ARCO PIXELS QUE FALTAN
C	MAL AJUSTADO	P	MAL AJUSTADO
D	CORTADO, DEFECTUOSO	Q	CORTOCIRCUITO
E	DEFORMADO	R	ABIERTO
F	ENGANCHADO, BLOQUEADO	S	PÉRDIDA
G	RASGUÑO	T	MAL CONTACTO, SOLDADURA
H	HENDEDURA, PELADO, CORROSIÓN	U	CIRCUITO ABIERTO
I	SEPARACIÓN	V	PLACA HENDIDA
J	INESTABILIDAD	W	SOLDADURA SECA O QUE FALTA
K	PÉRDIDA	X	SOLDADURA EN PUENTE
L	SECO (SIN LUBRIFICANTE)	Y	COMPONENTE EQUIVOCADO
M	CUERPO EXTRAÑO	Z	COMPONENTE QUE FALTA
		1	ERROR DEL SOFTWARE

CÓDIGOS DE REPARACIÓN

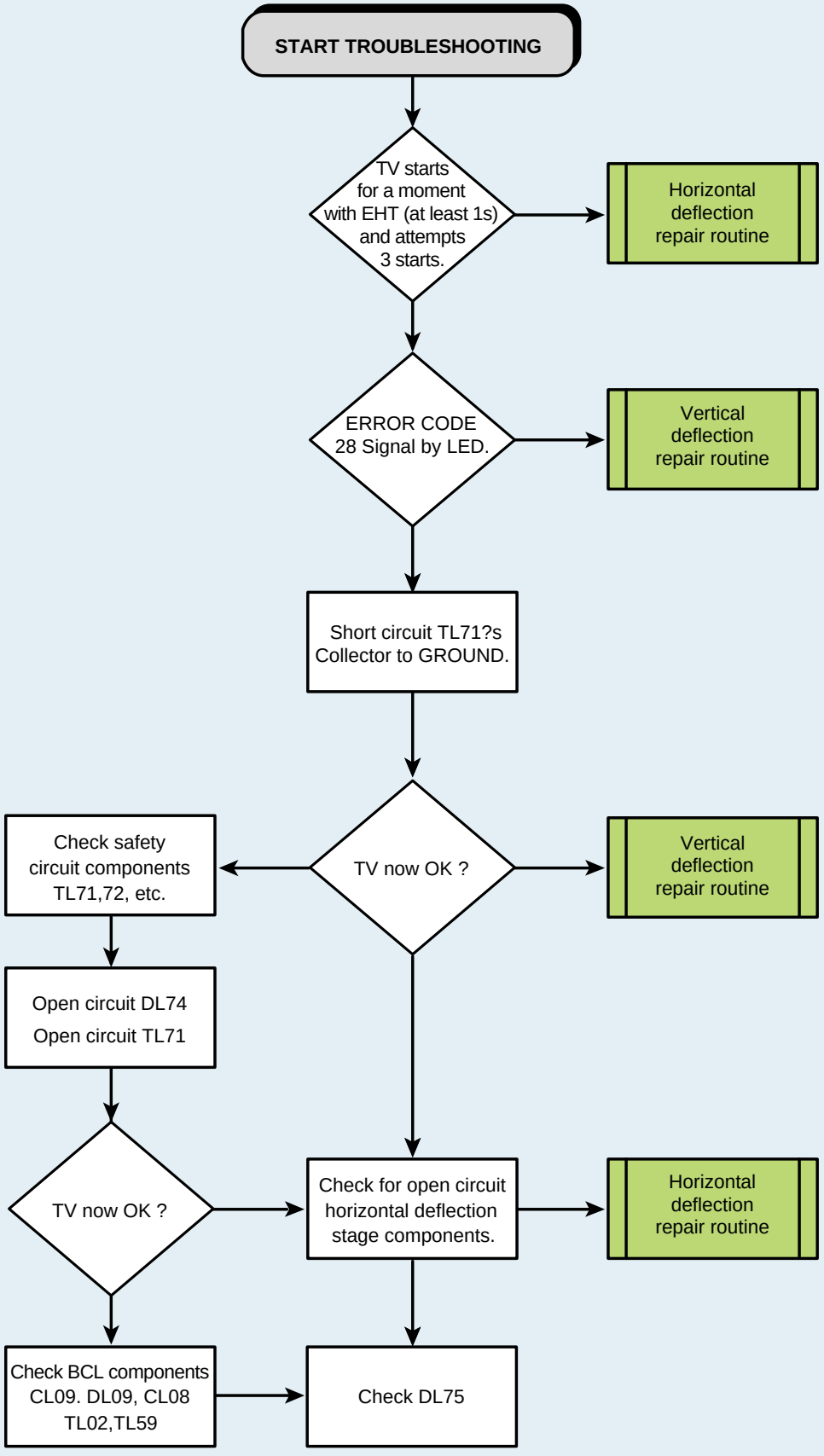
A	SUSTITUCIÓN	N	MANTENIMIENTO
B	AJUSTE MECÁNICO	O	REPULIR
C	AJUSTE ELÉCTRICO	P	SUSTITUCIÓN PREVENTIVA DE COMPONENTES
D	RESOLDADURA	Q	ACCIÓN PREVENTIVA SIN SUBSTITUCIÓN DE COMPONENTES
E	LIMPIEZA	U	EXPLICACIÓN AÑADIDA
F	ENGRASE	V	PRESUPUESTO RECHAZADO
G	COMPONENTES ELÉCTRICOS REPARADOS	W	PRESUPUESTO CON COMPONENTES
H	COMPONENTES MECÁNICOS REPARADOS	X	PRESUPUESTO SIN COMPONENTES
I	MODIFICACIÓN SEGÚN BOLETÍN DE SERVICIO		
J	COMPONENTES QUITADOS		
K	COMPONENTES AÑADIDOS	Y	DEVUELTO AL CLIENTE SIN REPARACIÓN
L	COMPROBACIÓN FUNCIONAL	Z	CAMBIO DEL APARATO
M	MEDICIÓN DE ESPECIFICACIÓN		

BANDEROLA : INDICA LA ÚNICA Y PRINCIPAL COMBINACIÓN SÍNTOMA/COMPONENTE POR '1'

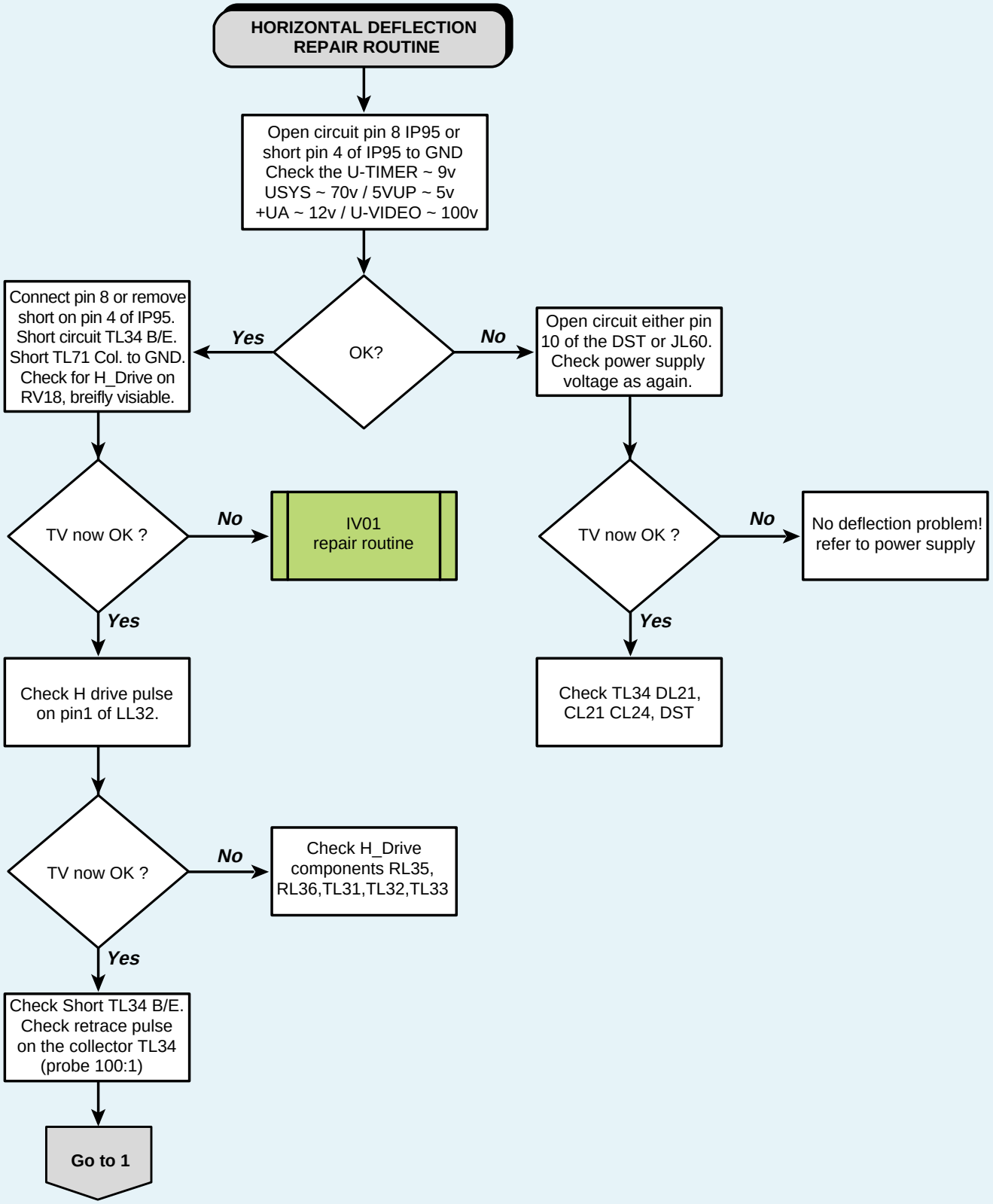
EJEMPLO:


BANDEROLA
CÓDIGO DE SÍNTOMA
CODIGO DE REPUESTO
NÚMERO DE REFERENCIA
COMPONENTE/ PLACA
CÓDIGO DE DEFECTO
CÓDOGO DE REPARACIÓN
CANTIDAD
1 .
1 4 4 1 2 1 3 6 4 1
1 1 1 5 1 7 1 8 1 9 1 X 1 X 1 3 4 5 6 7 8 9 X X
R 1 2 3 . . R 1 1 1 . .
Y A 2 2 . . Y T D M . .
R C
A B
1 0

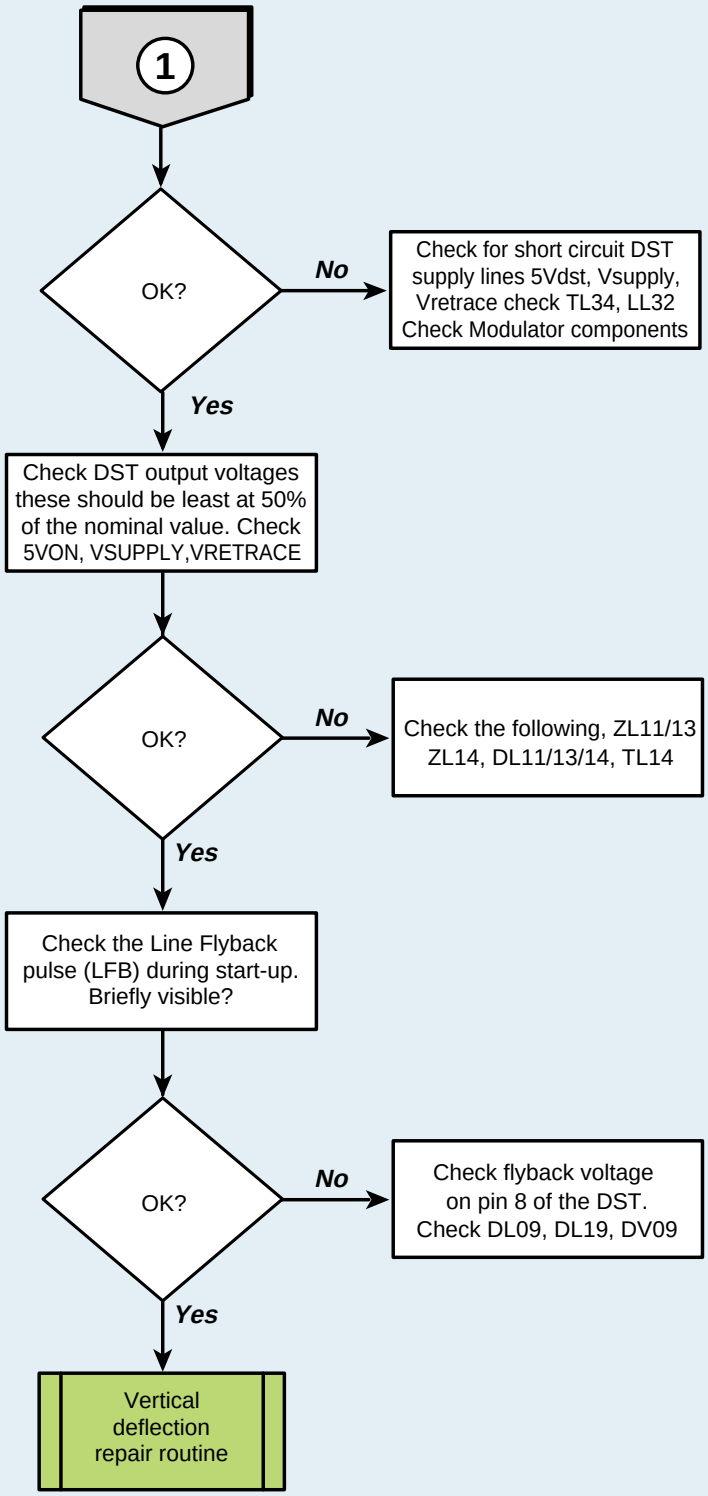
DEFLECTION CIRCUIT CHECK


START TROUBLESHOOTING
TV starts for a moment with EHT (at least 1s) and attempts 3 starts.
Horizontal deflection repair routine
ERROR CODE 28 Signal by LED.
Vertical deflection repair routine
Short circuit TL71?s Collector to GROUND.
TV now OK ?
Vertical deflection repair routine
Check safety circuit components TL71,72, etc.
Open circuit DL74
Open circuit TL71
TV now OK ?
Check for open circuit horizontal deflection stage components.
Horizontal deflection repair routine
Check BCL components CL09. DL09, CL08 TL02,TL59
Check DL75

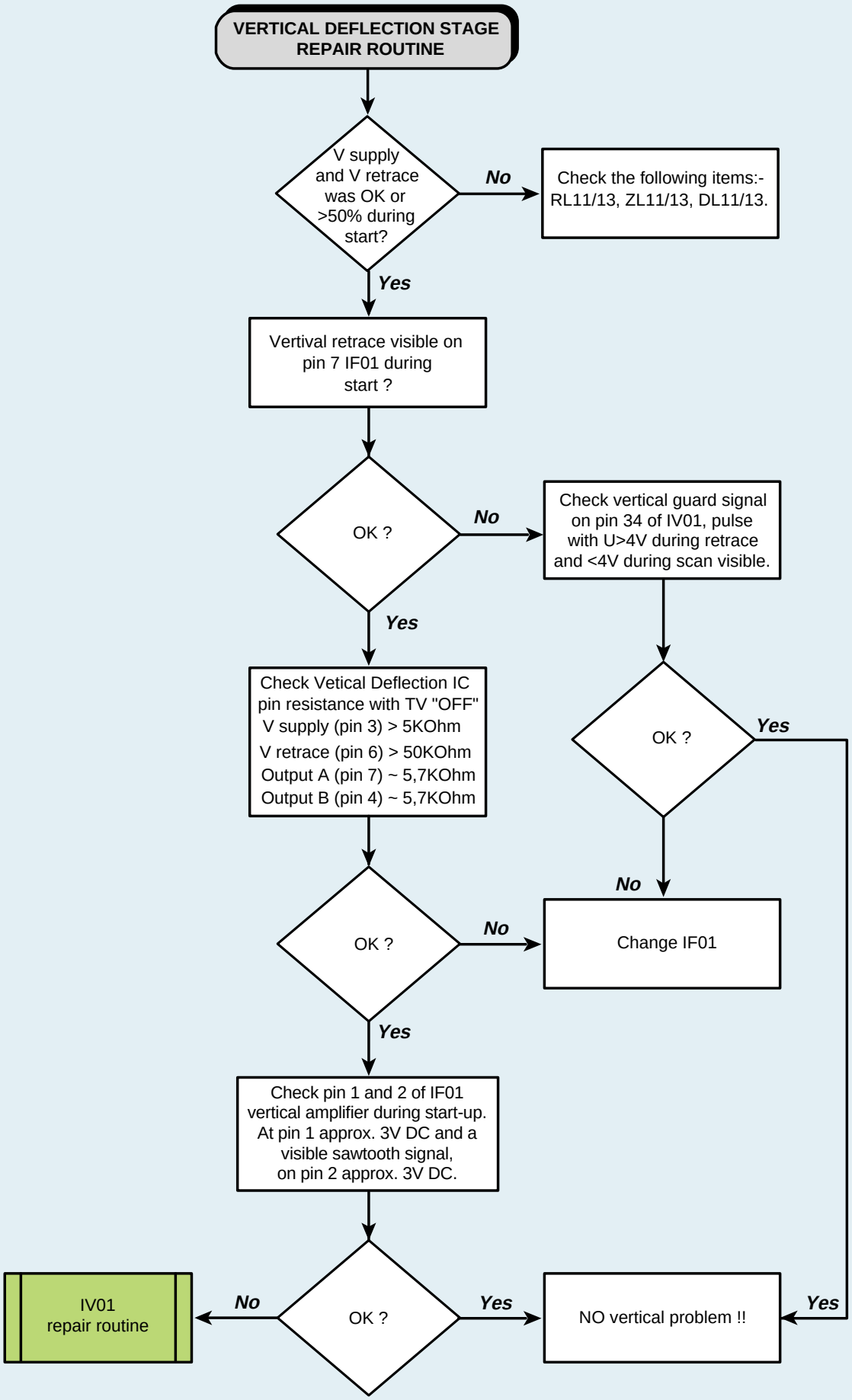
DEFLECTION CIRCUIT CHECK


HORIZONTAL DEFLECTION REPAIR ROUTINE
Open circuit pin 8 IP95 or short pin 4 of IP95 to GND Check the U-TIMER ~ 9v USYS ~ 70v / 5VUP ~ 5v +UA ~ 12v / U-VIDEO ~ 100v
OK?
Yes
No
Connect pin 8 or remove short on pin 4 of IP95. Short circuit TL34 B/E. Short TL71 Col. to GND. Check for H_Drive on RV18, breifly visiable.
Open circuit either pin 10 of the DST or JL60. Check power supply voltage as again.
TV now OK ?
No
IV01 repair routine
Yes
Check H drive pulse on pin1 of LL32.
TV now OK ?
No
Check H_Drive components RL35, RL36,TL31,TL32,TL33
Yes
Check Short TL34 B/E. Check retrace pulse on the collector TL34 (probe 100:1)
Go to 1
TV now OK ?
No
No deflection problem! refer to power supply
Yes
Check TL34 DL21, CL21 CL24, DST

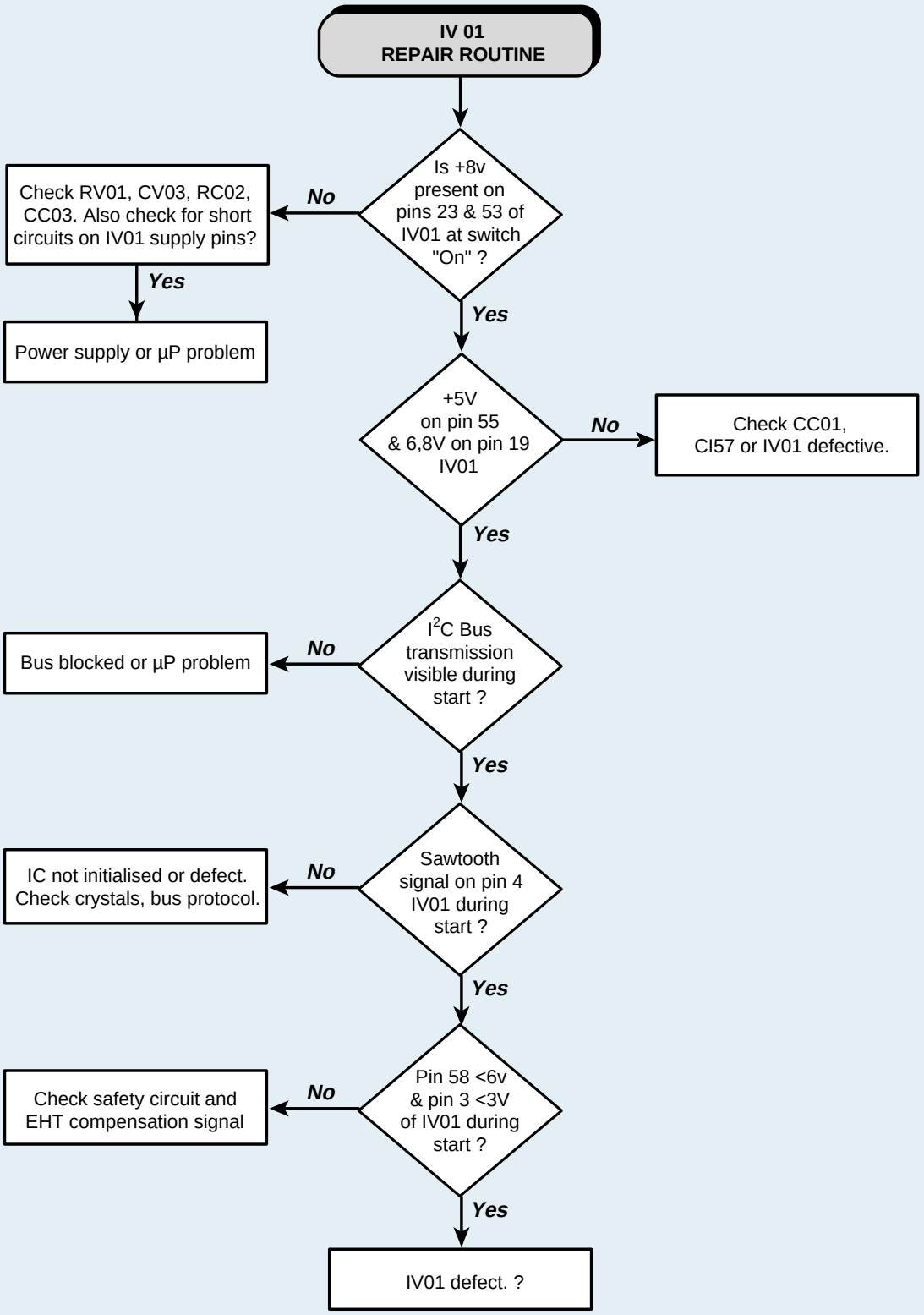
DEFLECTION CIRCUIT CHECK


1
OK?
No
Check for short circuit DST supply lines 5Vdst, Vsupply, Vretrace check TL34, LL32 Check Modulator components
Yes
Check DST output voltages these should be least at 50% of the nominal value. Check 5VON, VSUPPLY,VRETRACE
OK?
No
Check the following, ZL11/13 ZL14, DL11/13/14, TL14
Yes
Check the Line Flyback pulse (LFB) during start-up. Briefly visible?
OK?
No
Check flyback voltage on pin 8 of the DST. Check DL09, DL19, DV09
Yes
Vertical deflection repair routine

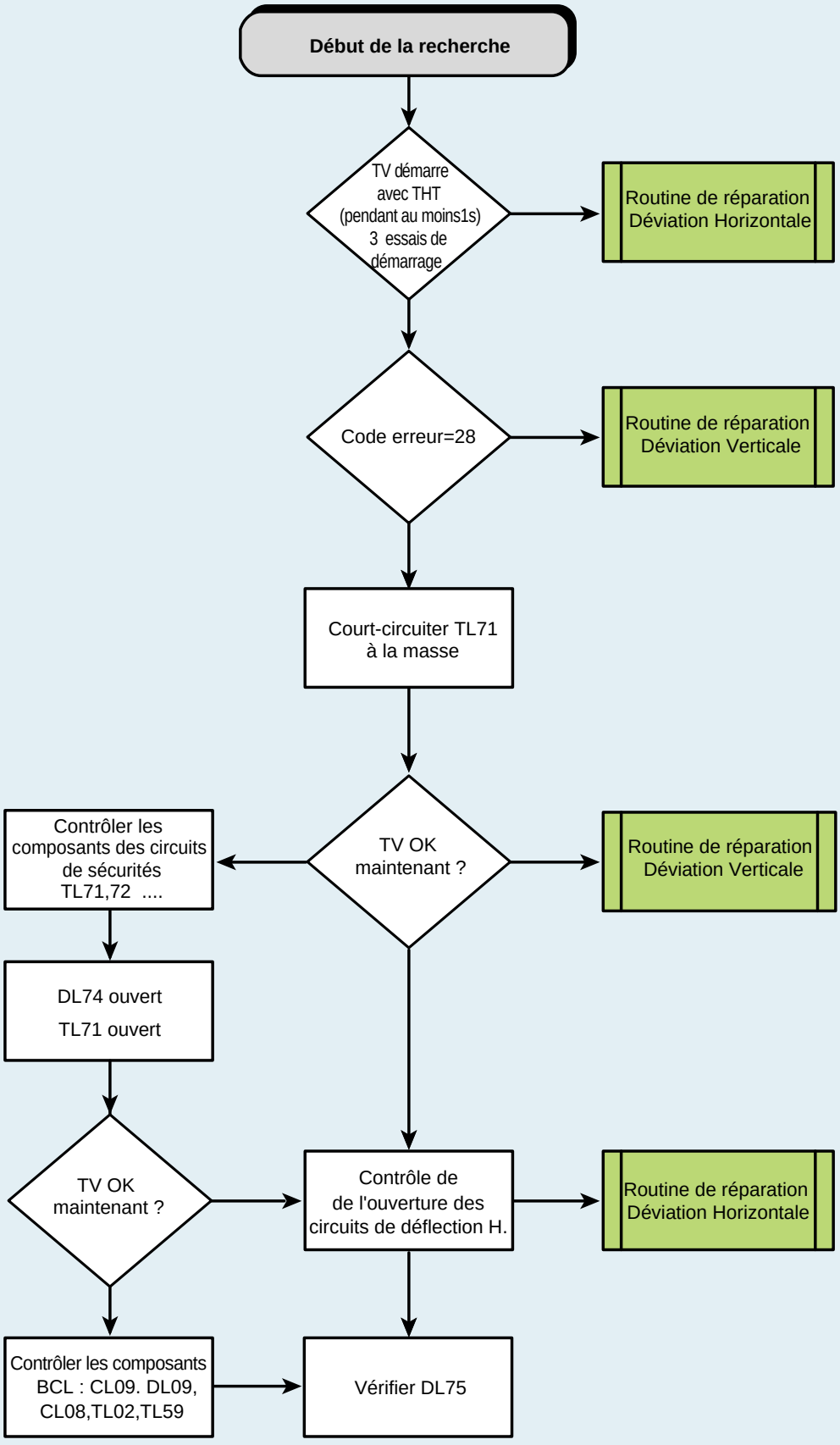
DEFLECTION CIRCUIT CHECK



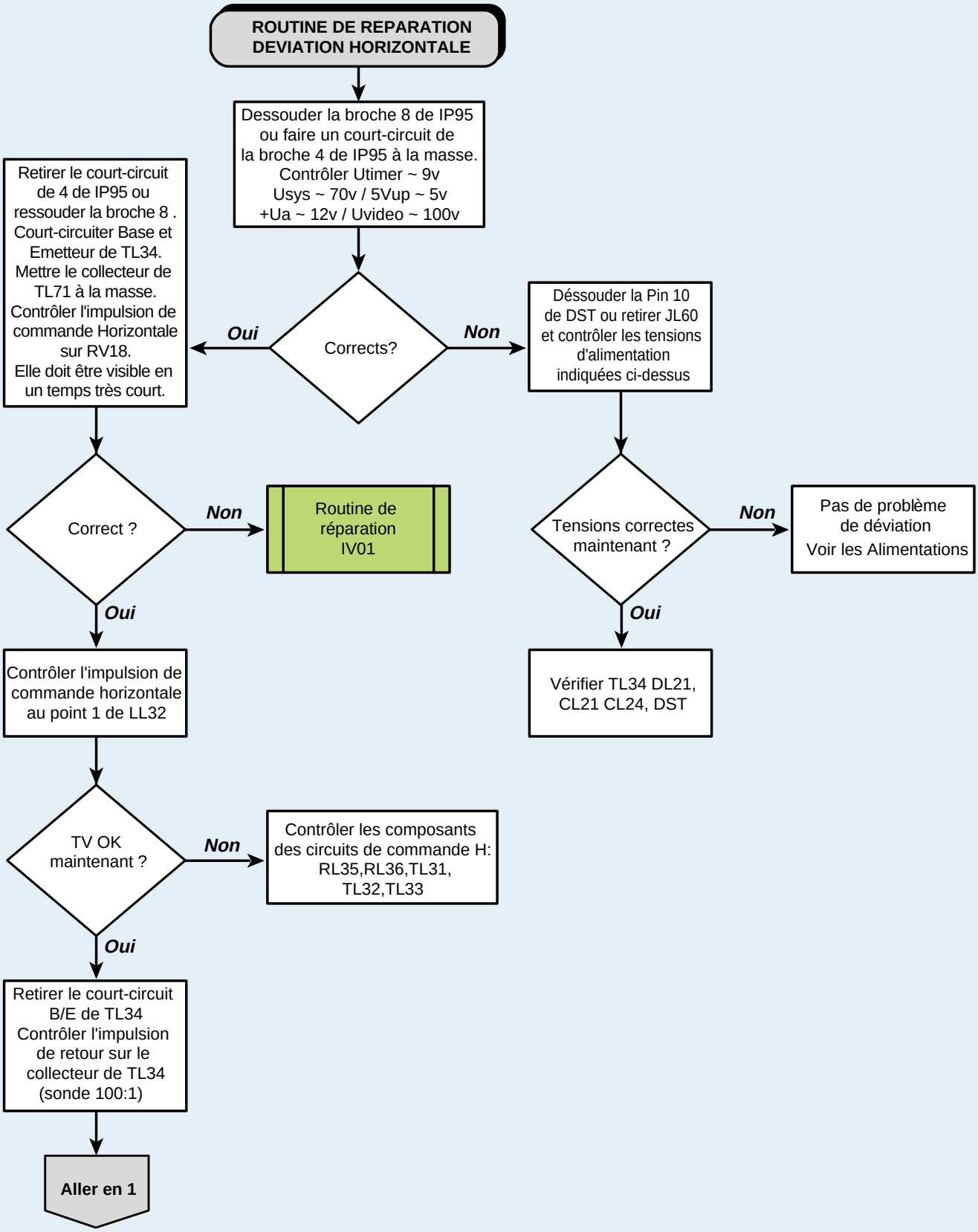
DEFLECTION CIRCUIT CHECK


IV 01
REPAIR ROUTINE
Is +8v present on pins 23 & 53 of IV01 at switch "On" ?
No
Check RV01, CV03, RC02, CC03. Also check for short circuits on IV01 supply pins?
Yes
Power supply or µP problem
Yes
+5V on pin 55 & 6,8V on pin 19 IV01
No
Check CC01, CI57 or IV01 defective.
Yes
I²C Bus transmission visible during start ?
No
Bus blocked or µP problem
Yes
Sawtooth signal on pin 4 IV01 during start ?
No
IC not initialised or defect. Check crystals, bus protocol.
Yes
Pin 58 <6v & pin 3 <3V of IV01 during start ?
No
Check safety circuit and EHT compensation signal
Yes
IV01 defect. ?

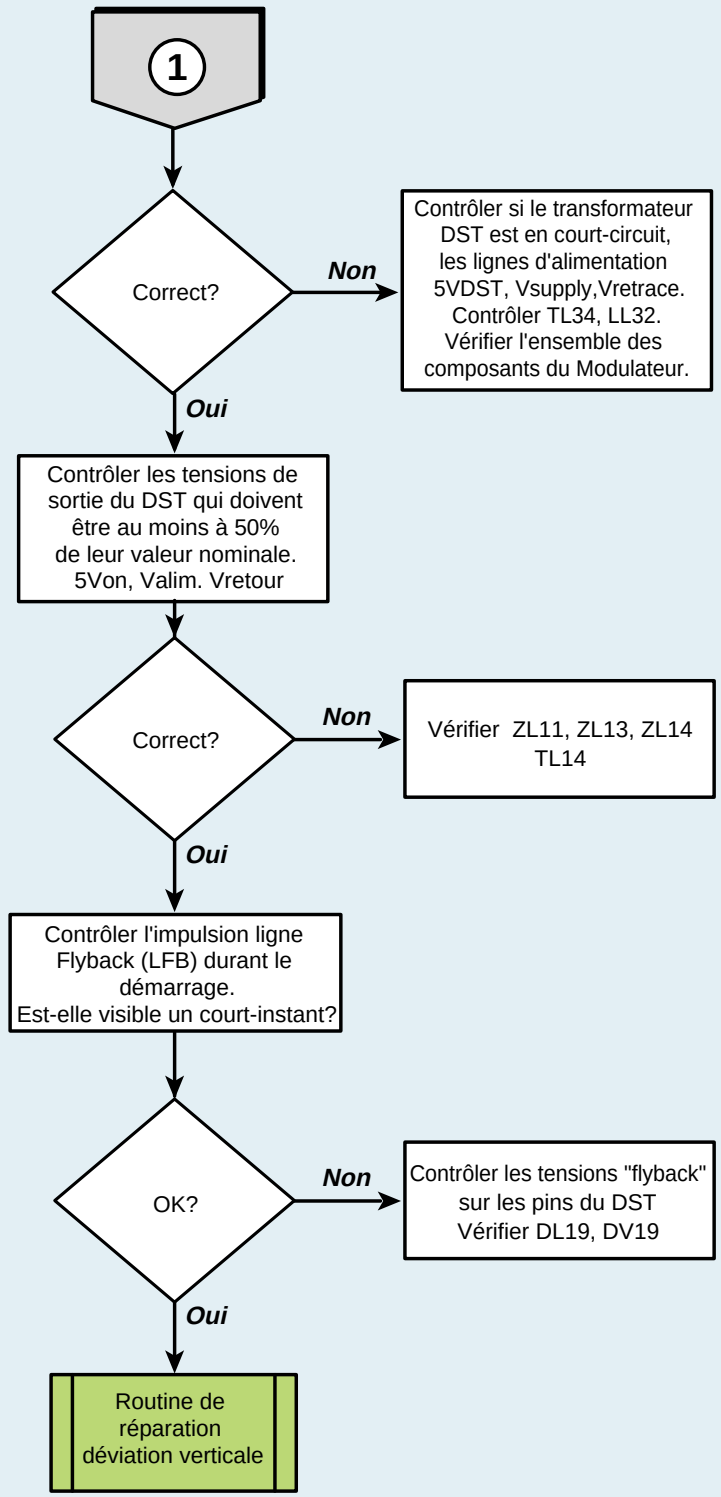
CONTROLES DES CIRCUITS DE DEVIATION


Début de la recherche
TV démarre avec THT (pendant au moins1s) 3 essais de démarrage
Routine de réparation Déviation Horizontale
Code erreur=28
Routine de réparation Déviation Verticale
Court-circuiter TL71 à la masse
TV OK maintenant ?
Contrôler les composants des circuits de sécurités TL71,72 ....
Routine de réparation Déviation Verticale
DL74 ouvert
TL71 ouvert
TV OK maintenant ?
Contrôle de de l'ouverture des circuits de déflection H.
Routine de réparation Déviation Horizontale
Contrôler les composants BCL : CL09. DL09, CL08,TL02,TL59
Vérifier DL75

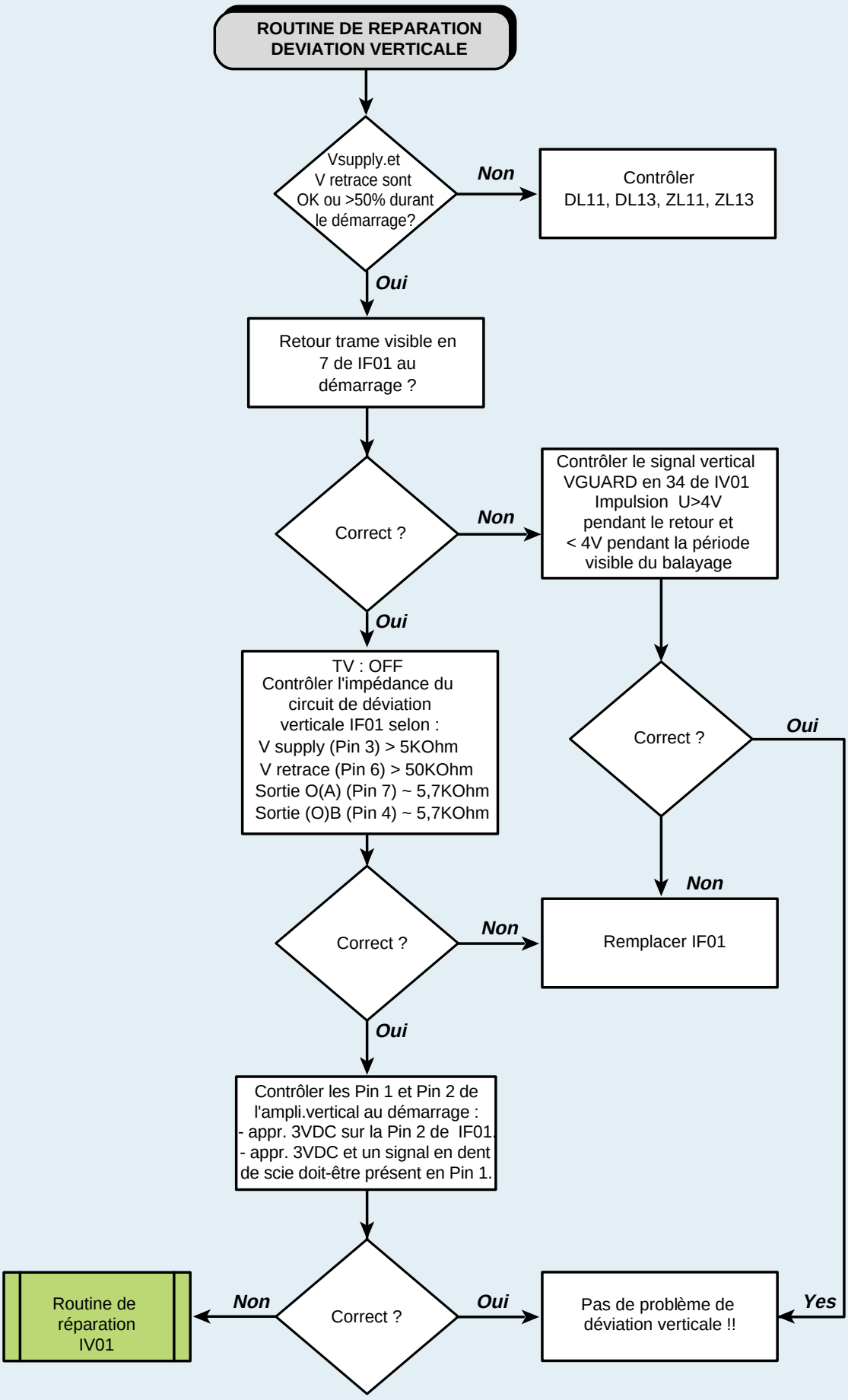
CONTROLES DES CIRCUITS DE DEVIATION



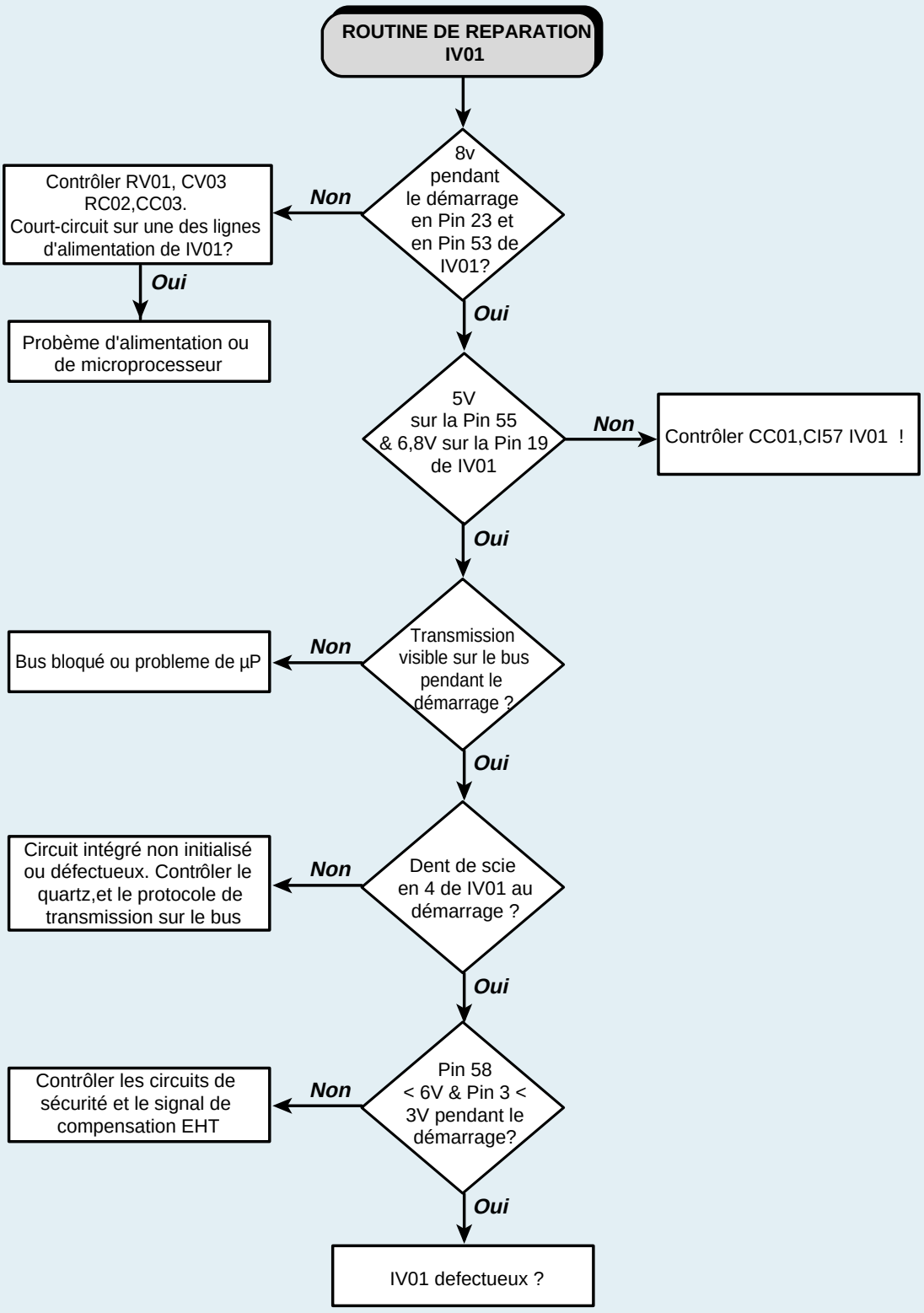
CONTROLES DES CIRCUITS DE DEVIATION


1
Correct?
Non
Contrôler si le transformateur DST est en court-circuit, les lignes d'alimentation 5VDST, Vsupply,Vretrace. Contrôler TL34, LL32. Vérifier l'ensemble des composants du Modulateur.
Oui
Contrôler les tensions de sortie du DST qui doivent être au moins à 50% de leur valeur nominale. 5Von, Valim. Vretour
Correct?
Non
Vérifier ZL11, ZL13, ZL14 TL14
Oui
Contrôler l'impulsion ligne Flyback (LFB) durant le démarrage. Est-elle visible un court-instant?
OK?
Non
Contrôler les tensions "flyback" sur les pins du DST Vérifier DL19, DV19
Oui
Routine de réparation déviation verticale

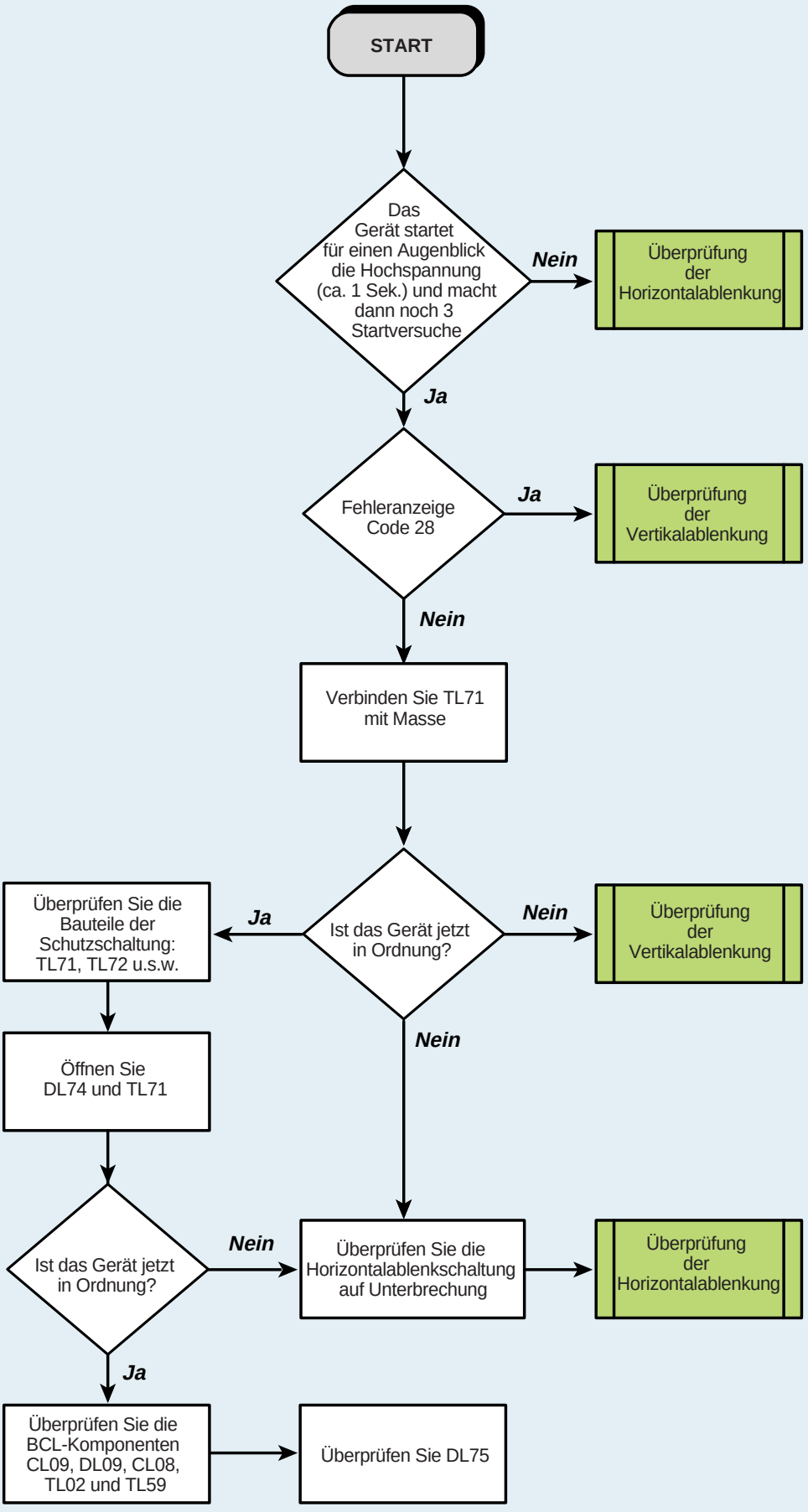
CONTROLES DES CIRCUITS DE DEVIATION



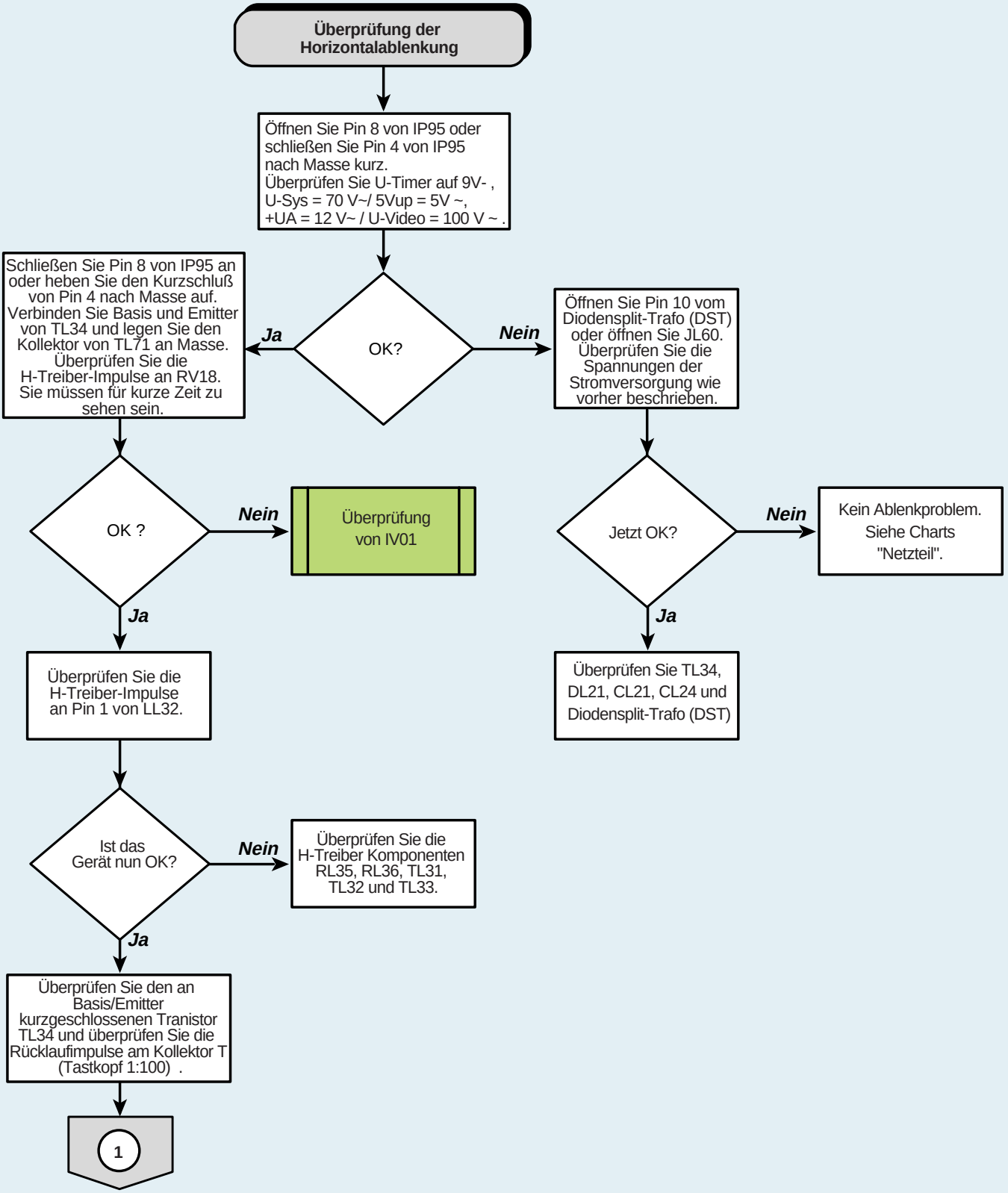
CONTROLES DES CIRCUITS DE DEVIATION


ROUTINE DE REPARATION IV01
8v pendant le démarrage en Pin 23 et en Pin 53 de IV01?
Non
Contrôler RV01, CV03 RC02,CC03. Court-circuit sur une des lignes d'alimentation de IV01?
Oui
Probème d'alimentation ou de microprocesseur
Oui
5V sur la Pin 55 & 6,8V sur la Pin 19 de IV01
Non
Contrôler CC01,CI57 IV01 !
Oui
Transmission visible sur le bus pendant le démarrage ?
Non
Bus bloqué ou probleme de µP
Oui
Dent de scie en 4 de IV01 au démarrage ?
Non
Circuit intégré non initialisé ou défectueux. Contrôler le quartz,et le protocole de transmission sur le bus
Oui
Pin 58 < 6V & Pin 3 < 3V pendant le démarrage?
Non
Contrôler les circuits de sécurité et le signal de compensation EHT
Oui
IV01 defectueux ?

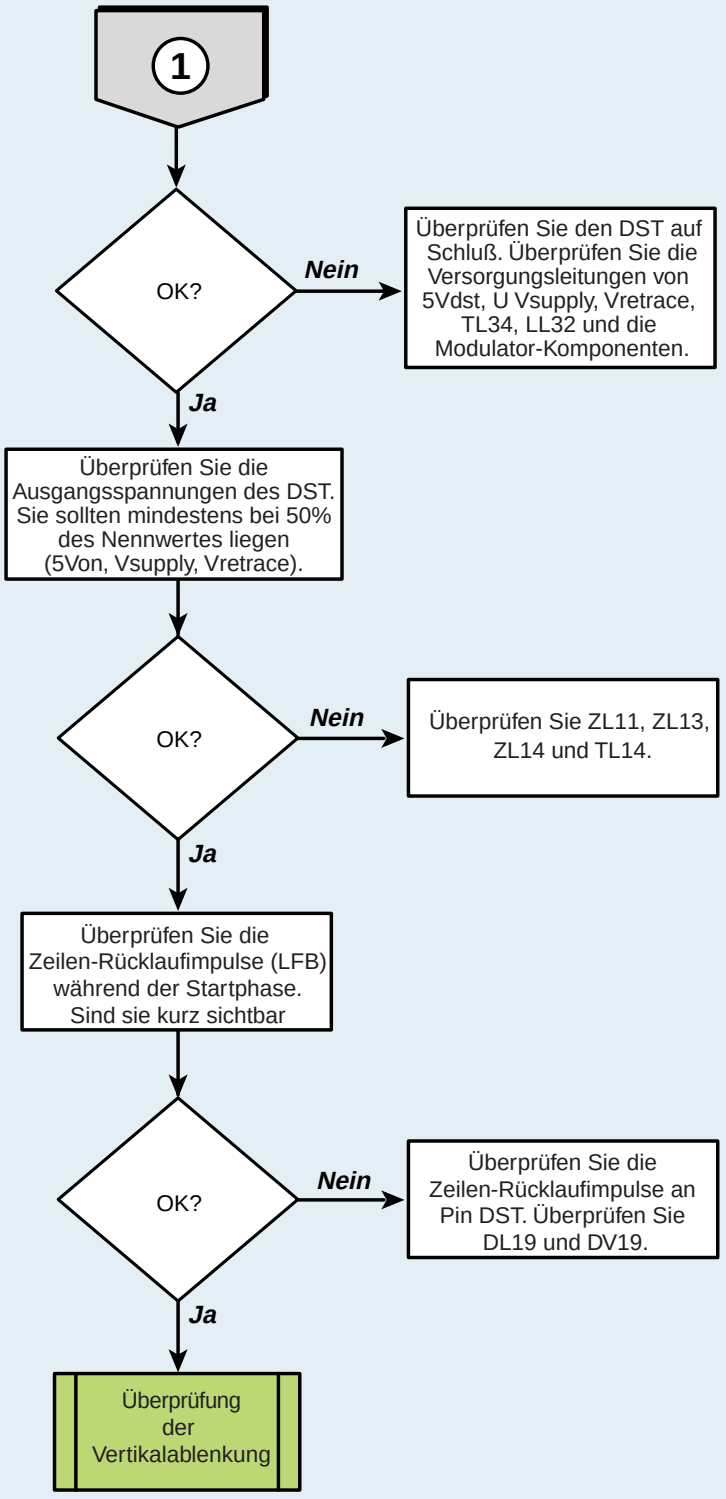
ÜBERPRÜFUNG DER ABLENKSCHALTUNG



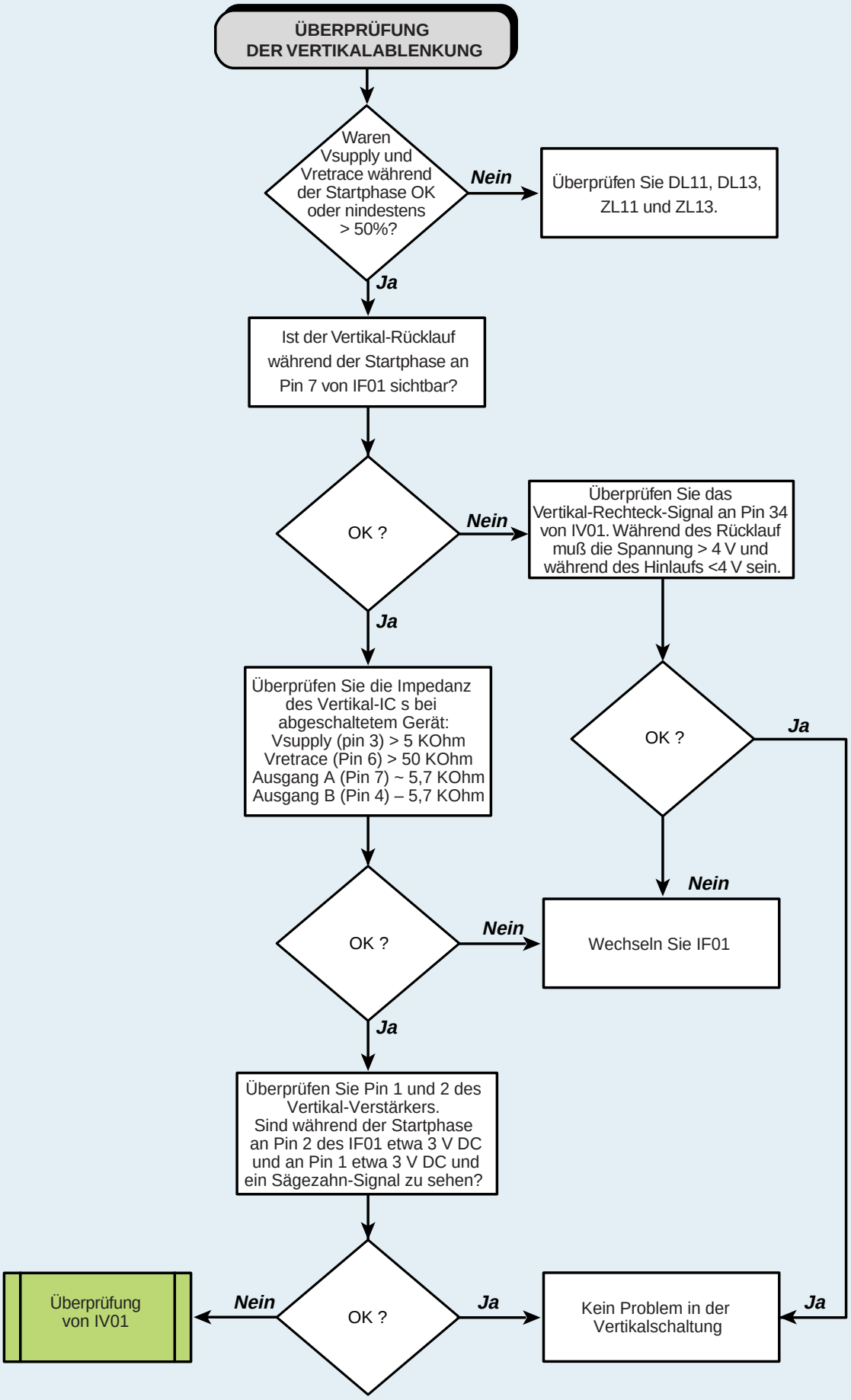
ÜBERPRÜFUNG DER ABLENKSCHALTUNG


Überprüfung der Horizontalablenkung
Öffnen Sie Pin 8 von IP95 oder schließen Sie Pin 4 von IP95 nach Masse kurz. Überprüfen Sie U-Timer auf 9V- , U-Sys = 70 V~/ 5Vup = 5V ~, +UA = 12 V~ / U-Video = 100 V ~ .
OK?
Ja
Nein
Schließen Sie Pin 8 von IP95 an oder heben Sie den Kurzschluß von Pin 4 nach Masse auf. Verbinden Sie Basis und Emitter von TL34 und legen Sie den Kollektor von TL71 an Masse. Überprüfen Sie die H-Treiber-Impulse an RV18. Sie müssen für kurze Zeit zu sehen sein.
Öffnen Sie Pin 10 vom Diodensplit-Trafo (DST) oder öffnen Sie JL60. Überprüfen Sie die Spannungen der Stromversorgung wie vorher beschrieben.
OK ?
Nein
Überprüfung von IV01
Ja
Überprüfen Sie die H-Treiber-Impulse an Pin 1 von LL32.
Jetzt OK?
Nein
Kein Ablenkproblem. Siehe Charts "Netzteil".
Ja
Überprüfen Sie TL34, DL21, CL21, CL24 und Diodensplit-Trafo (DST)
Ist das Gerät nun OK?
Nein
Überprüfen Sie die H-Treiber Komponenten RL35, RL36, TL31, TL32 und TL33.
Ja
Überprüfen Sie den an Basis/Emitter kurzgeschlossenen Tranistor TL34 und überprüfen Sie die Rücklaufimpulse am Kollektor T (Tastkopf 1:100) .
1

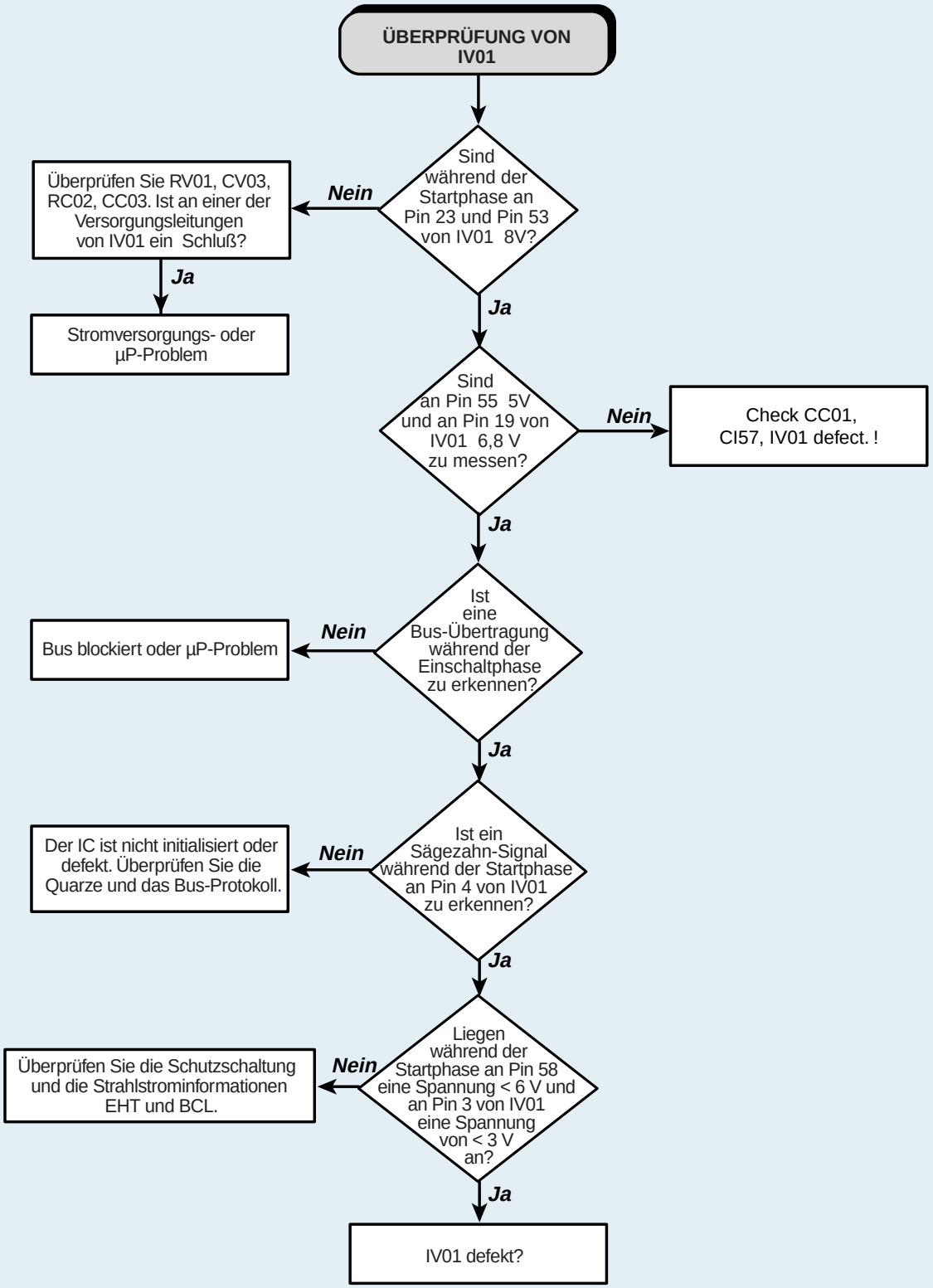
ÜBERPRÜFUNG DER ABLENKSCHALTUNG


1
OK?
Nein
Überprüfen Sie den DST auf Schluß. Überprüfen Sie die Versorgungsleitungen von 5Vdst, U Vsupply, Vretrace, TL34, LL32 und die Modulator-Komponenten.
Ja
Überprüfen Sie die Ausgangsspannungen des DST. Sie sollten mindestens bei 50% des Nennwertes liegen (5Von, Vsupply, Vretrace).
OK?
Nein
Überprüfen Sie ZL11, ZL13, ZL14 und TL14.
Ja
Überprüfen Sie die Zeilen-Rücklaufimpulse (LFB) während der Startphase. Sind sie kurz sichtbar
OK?
Nein
Überprüfen Sie die Zeilen-Rücklaufimpulse an Pin DST. Überprüfen Sie DL19 und DV19.
Ja
Überprüfung der Vertikalablenkung

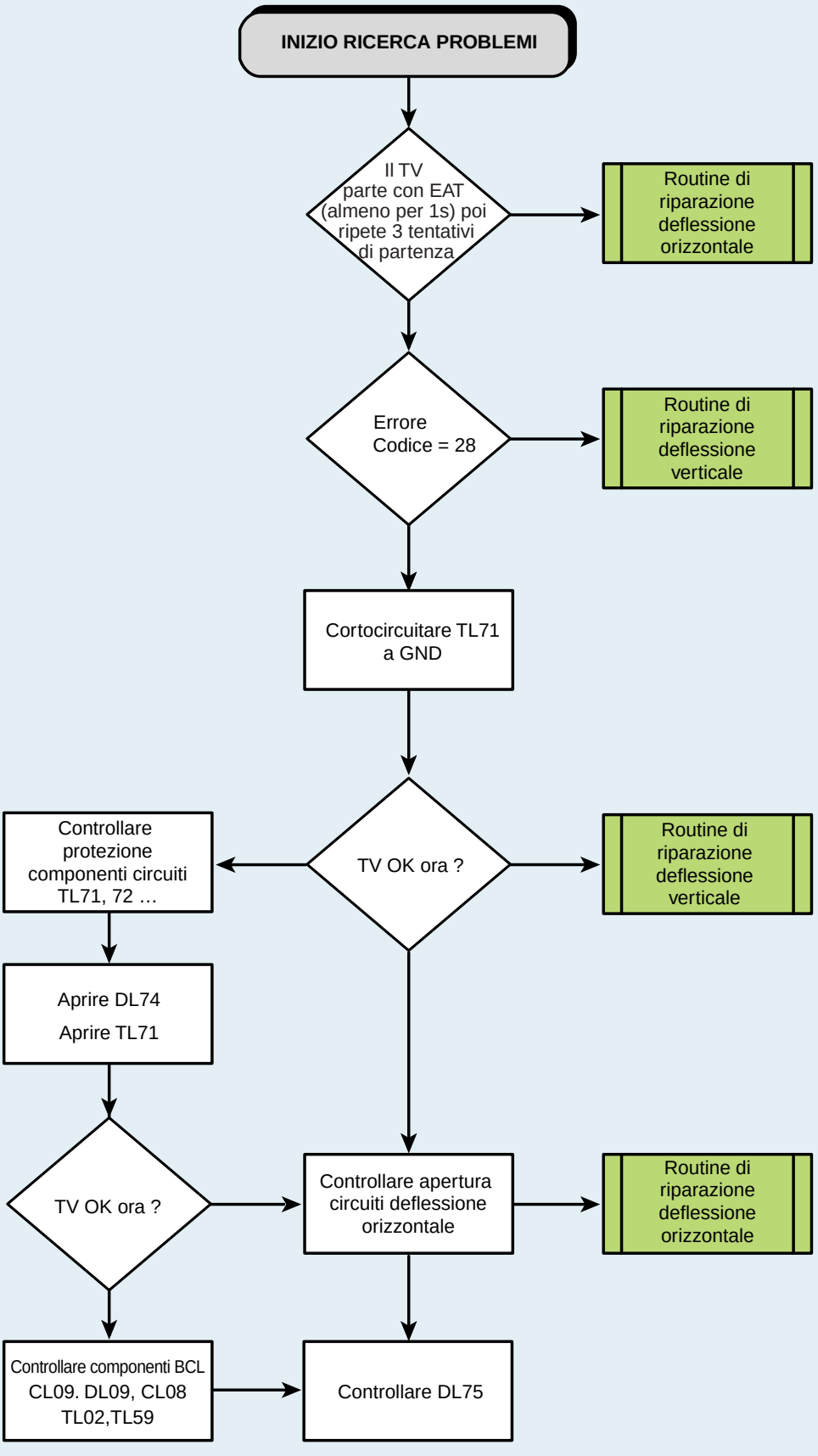
ÜBERPRÜFUNG DER ABLENKSCHALTUNG



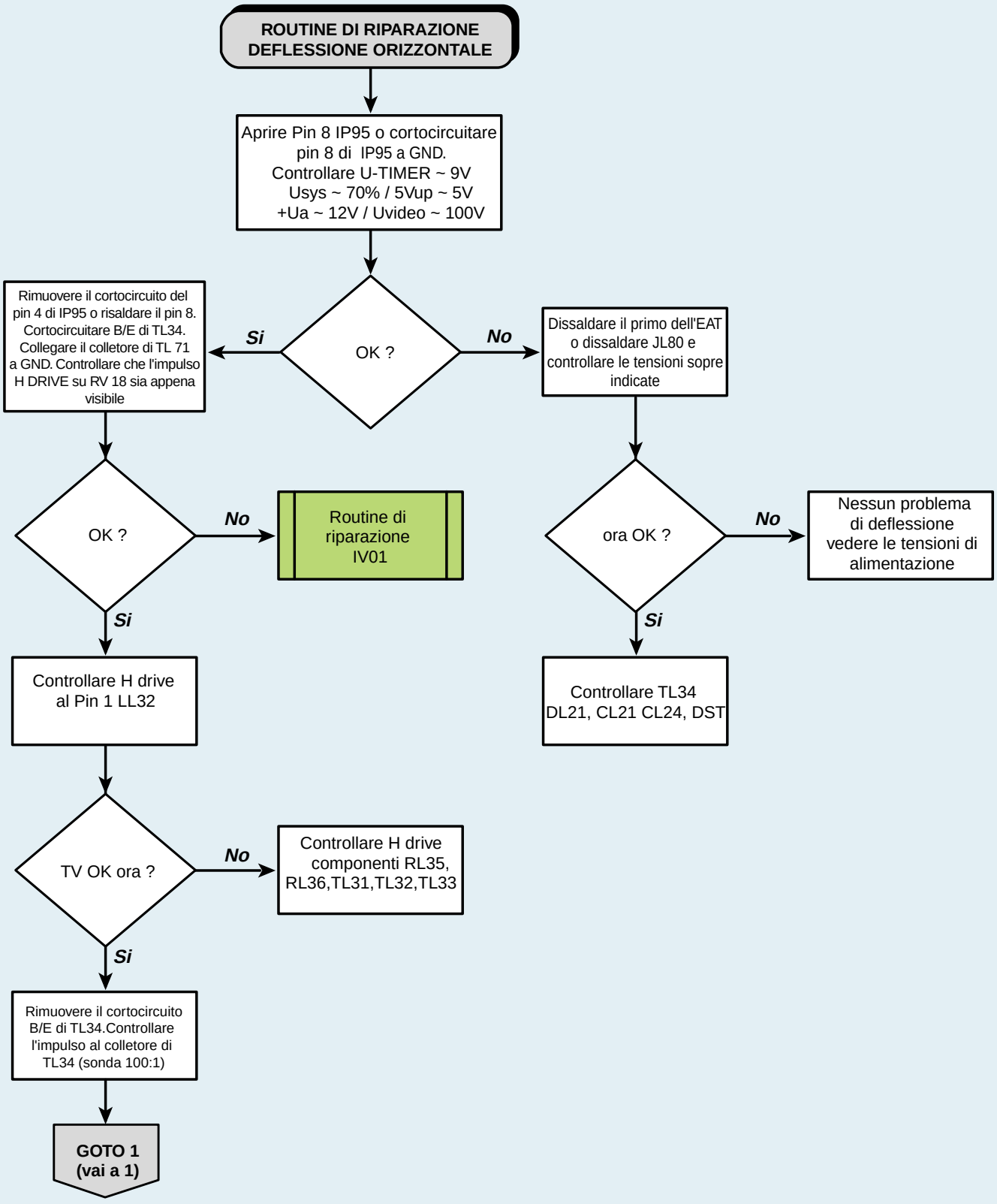
ÜBERPRÜFUNG DER ABLENKSCHALTUNG


ÜBERPRÜFUNG VON IV01
Sind während der Startphase an Pin 23 und Pin 53 von IV01 8V?
Nein
Überprüfen Sie RV01, CV03, RC02, CC03. Ist an einer der Versorgungsleitungen von IV01 ein Schluß?
Ja
Stromversorgungs- oder µP-Problem
Ja
Sind an Pin 55 5V und an Pin 19 von IV01 6,8 V zu messen?
Nein
Check CC01, CI57, IV01 defect. !
Ja
Ist eine Bus-Übertragung während der Einschaltphase zu erkennen?
Nein
Bus blockiert oder µP-Problem
Ja
Ist ein Sägezahn-Signal während der Startphase an Pin 4 von IV01 zu erkennen?
Nein
Der IC ist nicht initialisiert oder defekt. Überprüfen Sie die Quarze und das Bus-Protokoll.
Ja
Liegen während der Startphase an Pin 58 eine Spannung < 6 V und an Pin 3 von IV01 eine Spannung von < 3 V an?
Nein
Überprüfen Sie die Schutzschaltung und die Strahlstrominformationen EHT und BCL.
Ja
IV01 defekt?

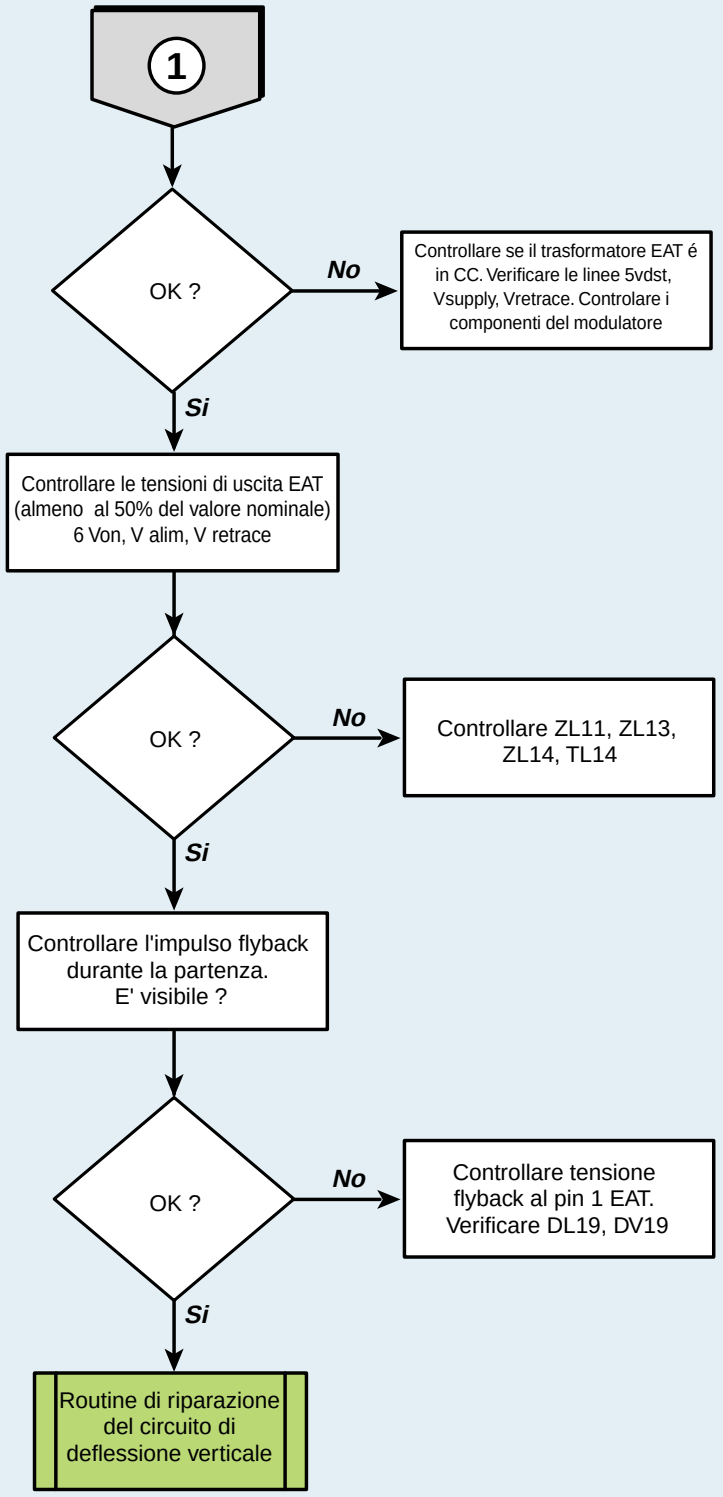
CONTROLLO DEI CIRCUITI DI DEFLESSIONE


INIZIO RICERCA PROBLEMI
Il TV parte con EAT (almeno per 1s) poi ripete 3 tentativi di partenza
Routine di riparazione deflessione orizzontale
Errore Codice = 28
Routine di riparazione deflessione verticale
Cortocircuitare TL71 a GND
TV OK ora ?
Controllare protezione componenti circuiti TL71, 72 …
Routine di riparazione deflessione verticale
Aprire DL74
Aprire TL71
TV OK ora ?
Controllare apertura circuiti deflessione orizzontale
Routine di riparazione deflessione orizzontale
Controllare componenti BCL CL09. DL09, CL08 TL02,TL59
Controllare DL75

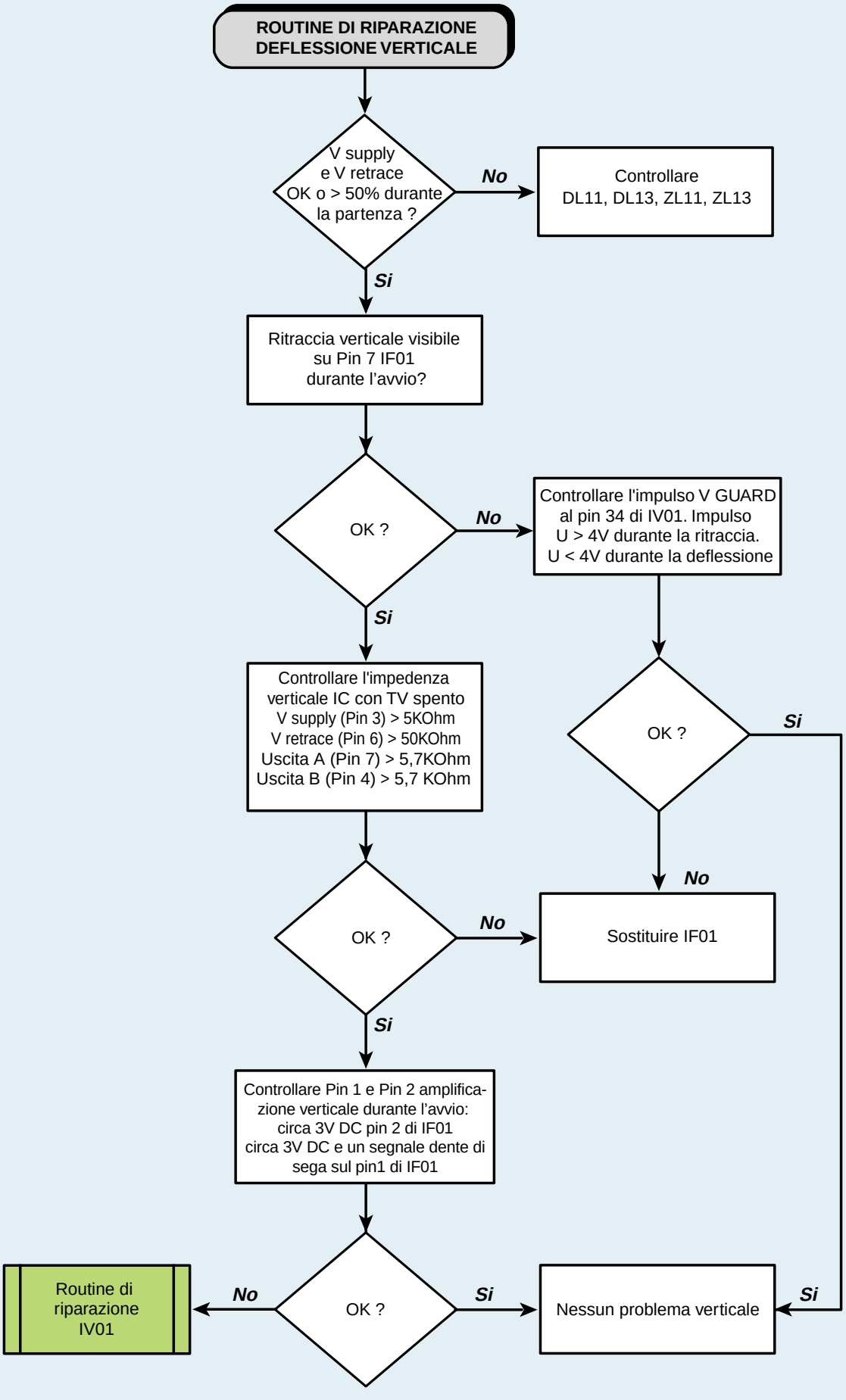
CONTROLLO DEI CIRCUITI DI DEFLESSIONE


ROUTINE DI RIPARAZIONE DEFLESSIONE ORIZZONTALE
Aprire Pin 8 IP95 o cortocircuitare pin 8 di IP95 a GND. Controllare U-TIMER ~ 9V Usys ~ 70% / 5Vup ~ 5V +Ua ~ 12V / Uvideo ~ 100V
OK ?
Si
No
Rimuovere il cortocircuito del pin 4 di IP95 o risaldare il pin 8. Cortocircuitare B/E di TL34. Collegare il colletore di TL 71 a GND. Controllare che l'impulso H DRIVE su RV 18 sia appena visibile
Dissaldare il primo dell'EAT o dissaldare JL80 e controllare le tensioni sopre indicate
OK ?
No
Routine di riparazione IV01
Si
Controllare H drive al Pin 1 LL32
ora OK ?
No
Nessun problema di deflessione vedere le tensioni di alimentazione
Si
Controllare TL34 DL21, CL21 CL24, DST
TV OK ora ?
No
Controllare H drive componenti RL35, RL36,TL31,TL32,TL33
Si
Rimuovere il cortocircuito B/E di TL34.Controllare l'impulso al colletore di TL34 (sonda 100:1)
GOTO 1 (vai a 1)

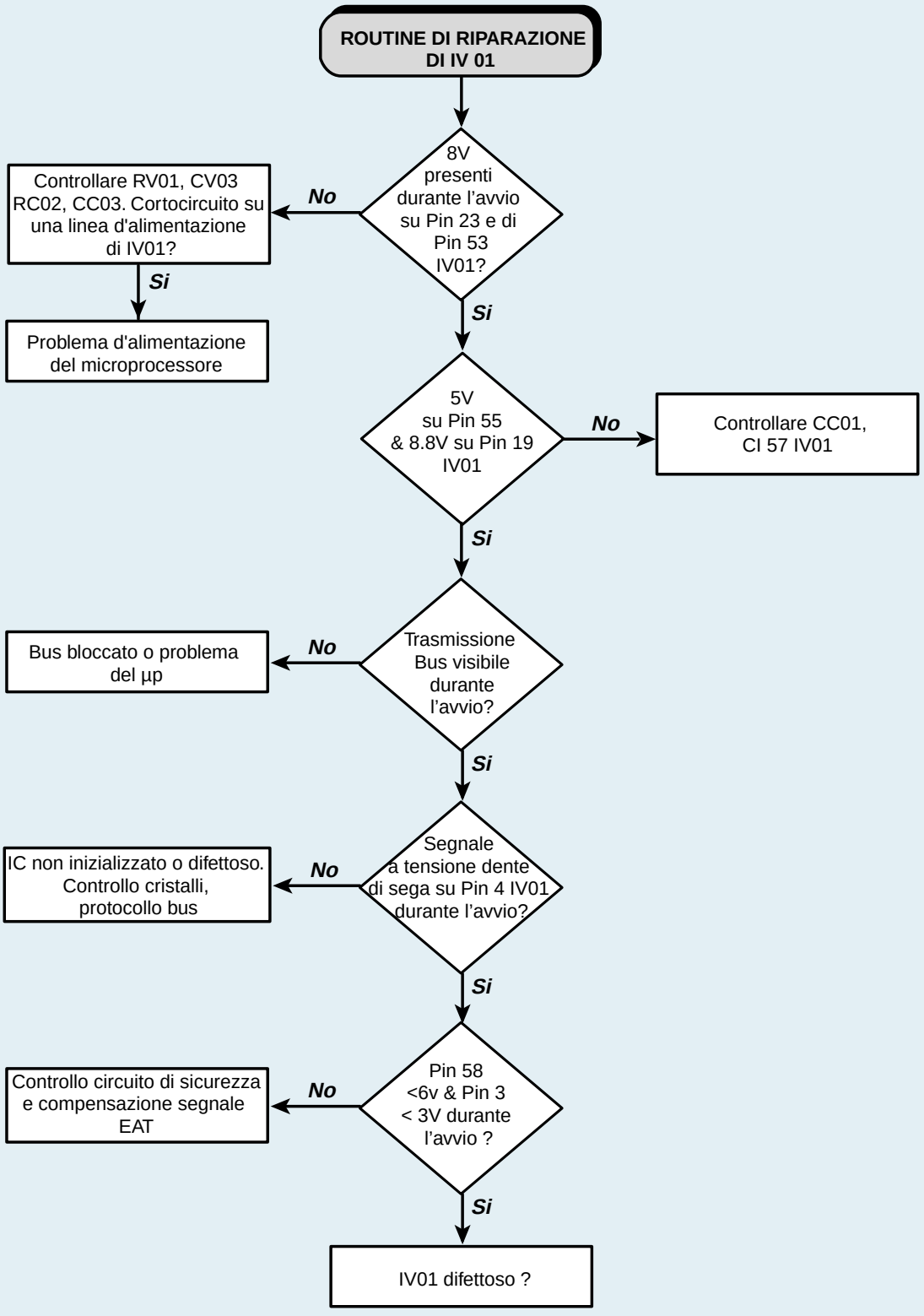
CONTROLLO DEI CIRCUITI DI DEFLESSIONE


1
OK ?
No
Controllare se il trasformatore EAT é in CC. Verificare le linee 5vdst, Vsupply, Vretrace. Controlare i componenti del modulatore
Si
Controllare le tensioni di uscita EAT (almeno al 50% del valore nominale) 6 Von, V alim, V retrace
OK ?
No
Controllare ZL11, ZL13, ZL14, TL14
Si
Controllare l'impulso flyback durante la partenza. E' visibile ?
OK ?
No
Controllare tensione flyback al pin 1 EAT. Verificare DL19, DV19
Si
Routine di riparazione del circuito di deflessione verticale

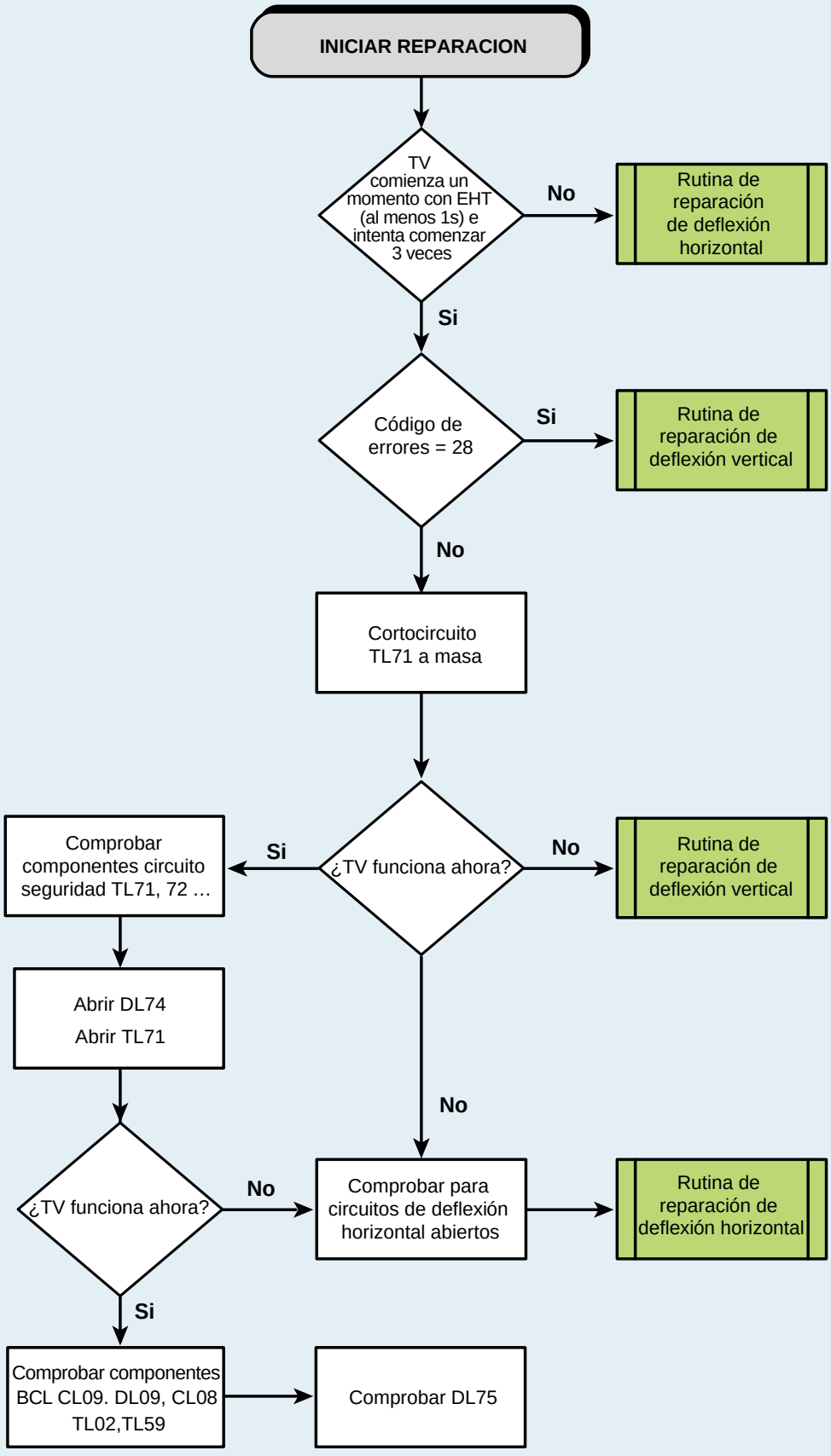
CONTROLLO DEI CIRCUITI DI DEFLESSIONE



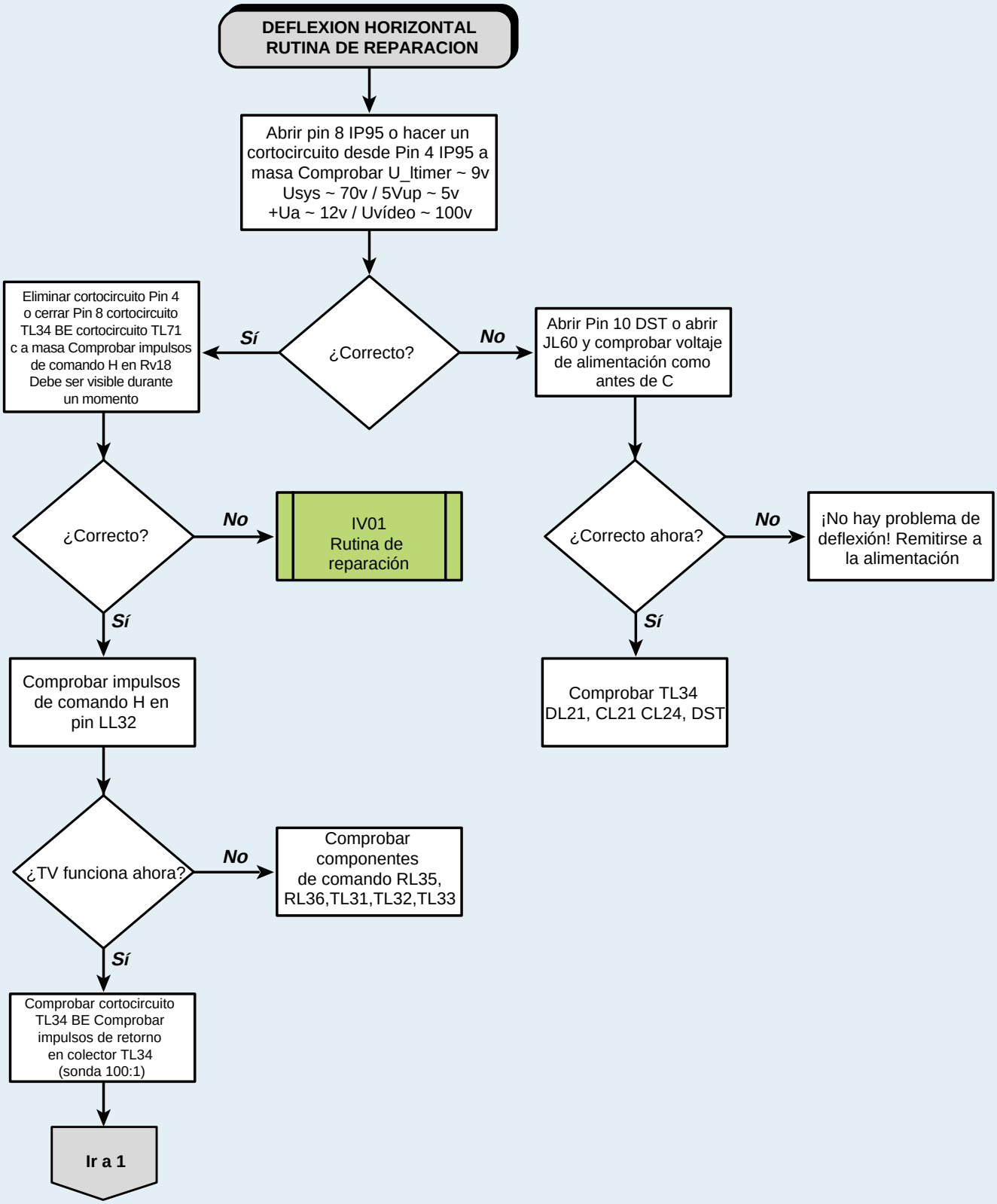
CONTROLLO DEI CIRCUITI DI DEFLESSIONE


ROUTINE DI RIPARAZIONE DI IV 01
8V presenti durante l'avvio su Pin 23 e di Pin 53 IV01?
No
Controllare RV01, CV03 RC02, CC03. Cortocircuito su una linea d'alimentazione di IV01?
Si
Problema d'alimentazione del microprocessore
Si
5V su Pin 55 & 8.8V su Pin 19 IV01
No
Controllare CC01, CI 57 IV01
Si
Trasmissione Bus visibile durante l'avvio?
No
Bus bloccato o problema del µp
Si
Segnale a tensione dente di sega su Pin 4 IV01 durante l'avvio?
No
IC non inizializzato o difettoso. Controllo cristalli, protocollo bus
Si
Pin 58 <6v & Pin 3 < 3V durante l'avvio ?
No
Controllo circuito di sicurezza e compensazione segnale EAT
Si
IV01 difettoso ?

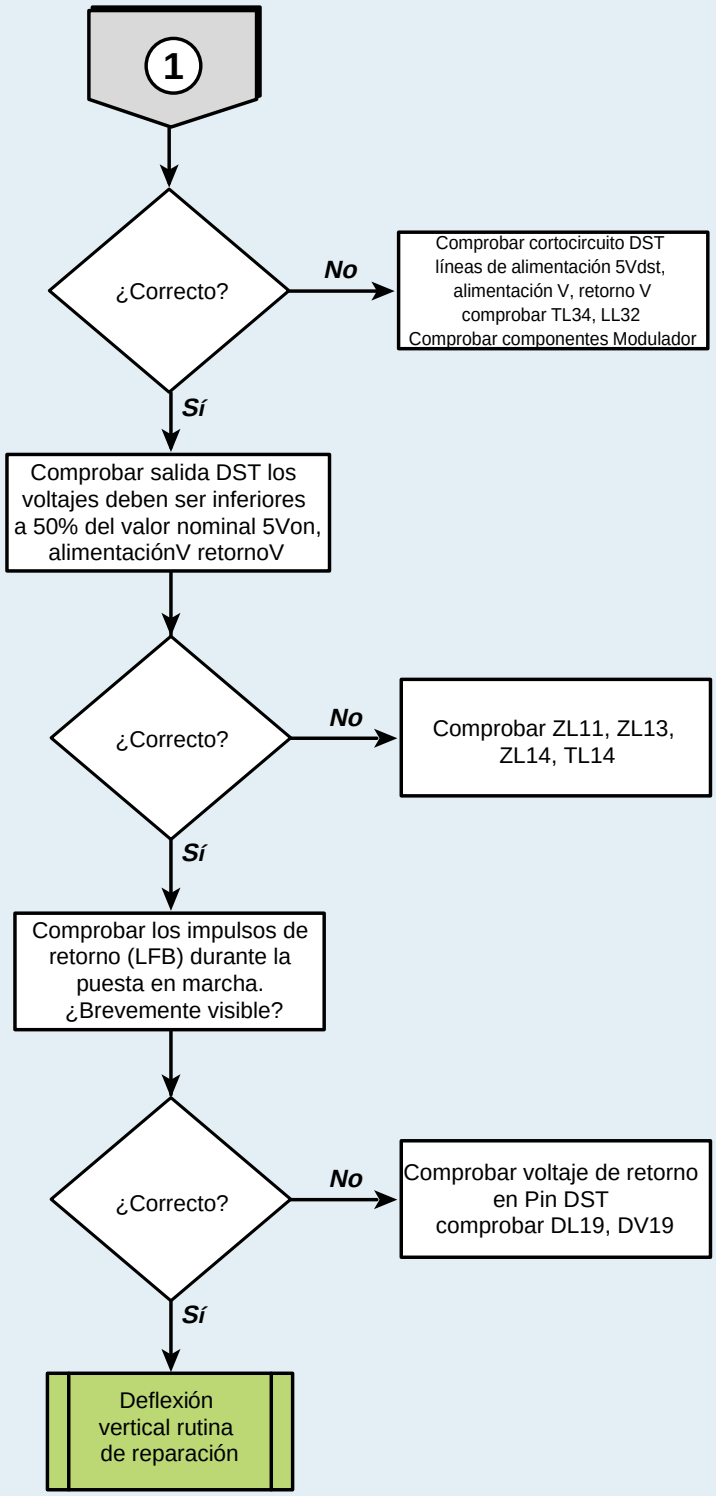
INSPECCION DEL CIRCUITO DE DEFLEXION



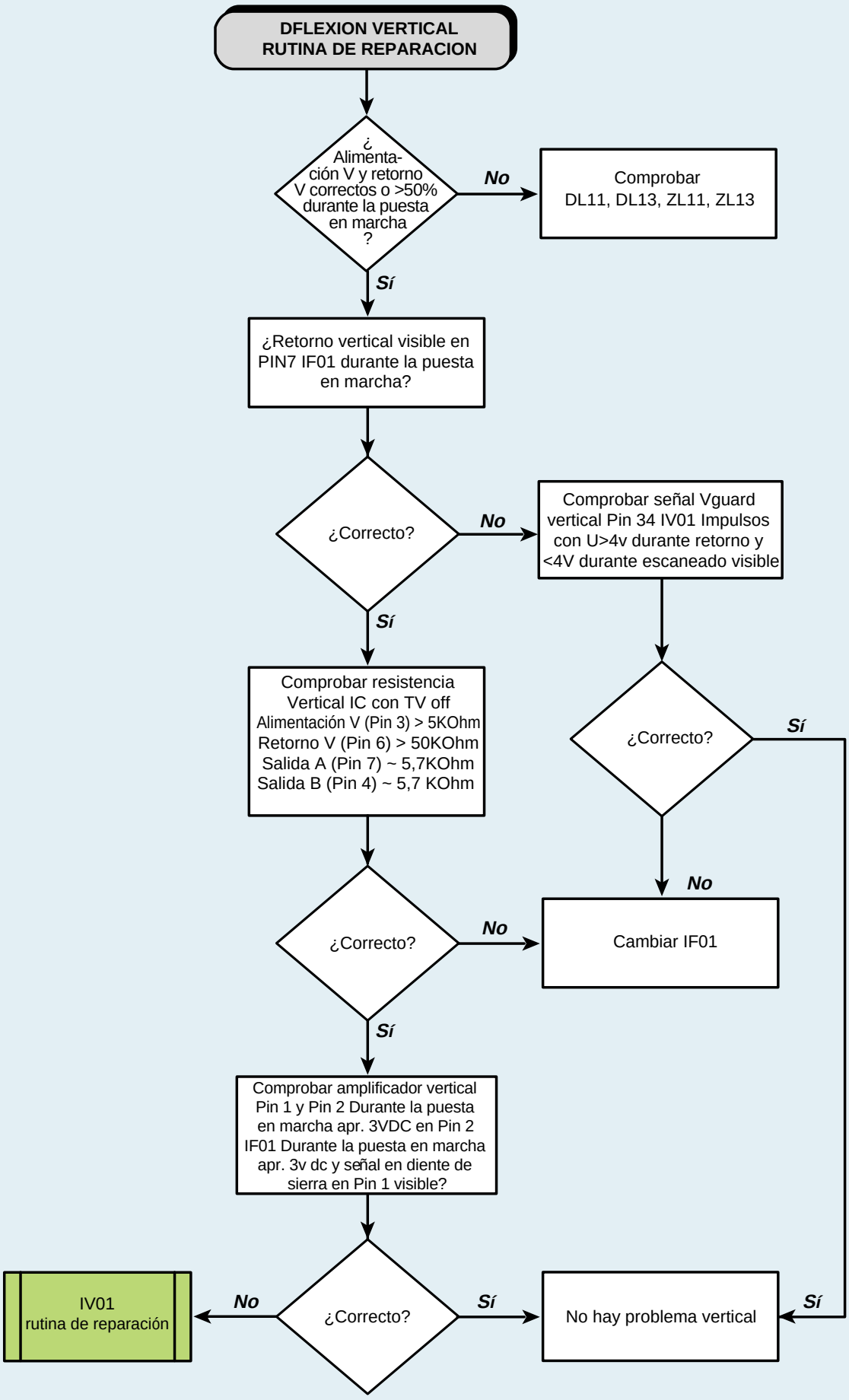
INSPECCION DEL CIRCUITO DE DEFLEXION


DEFLEXION HORIZONTAL
RUTINA DE REPARACION
Abrir pin 8 IP95 o hacer un cortocircuito desde Pin 4 IP95 a masa Comprobar U_ltimer ~ 9v
Usys ~ 70v / 5Vup ~ 5v
+Ua ~ 12v / Uvídeo ~ 100v
¿Correcto?
Sí
Eliminar cortocircuito Pin 4 o cerrar Pin 8 cortocircuito TL34 BE cortocircuito TL71 c a masa Comprobar impulsos de comando H en Rv18 Debe ser visible durante un momento
No
Abrir Pin 10 DST o abrir JL60 y comprobar voltaje de alimentación como antes de C
¿Correcto?
No
IV01
Rutina de reparación
Sí
Comprobar impulsos de comando H en pin LL32
¿TV funciona ahora?
No
Comprobar componentes de comando RL35, RL36,TL31,TL32,TL33
Sí
Comprobar cortocircuito TL34 BE Comprobar impulsos de retorno en colector TL34 (sonda 100:1)
Ir a 1
¿Correcto ahora?
No
¡No hay problema de deflexión! Remitirse a la alimentación
Sí
Comprobar TL34 DL21, CL21 CL24, DST

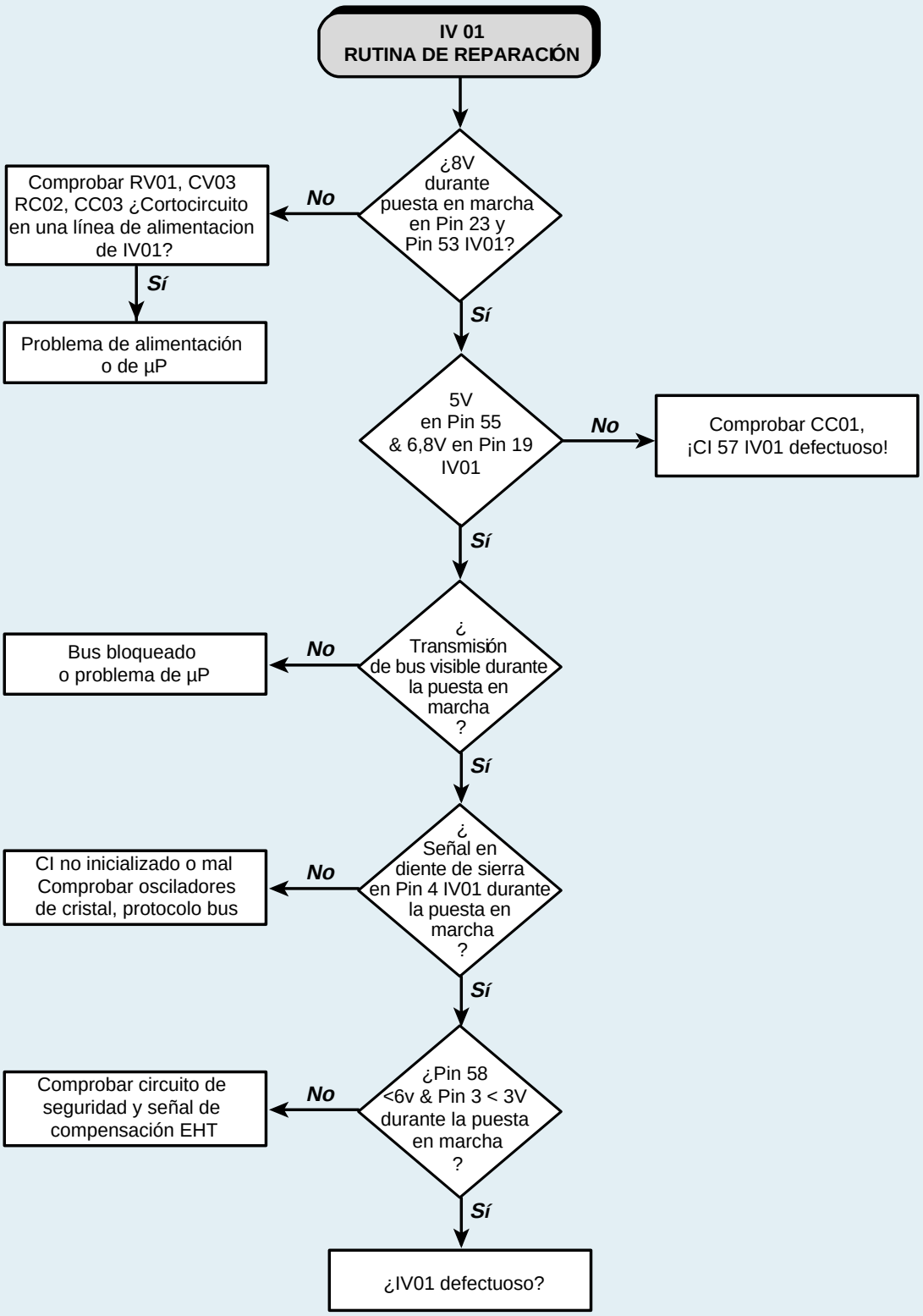
INSPECCION DEL CIRCUITO DE DEFLEXION



INSPECCION DEL CIRCUITO DE DEFLEXION



INSPECCION DEL CIRCUITO DE DEFLEXION

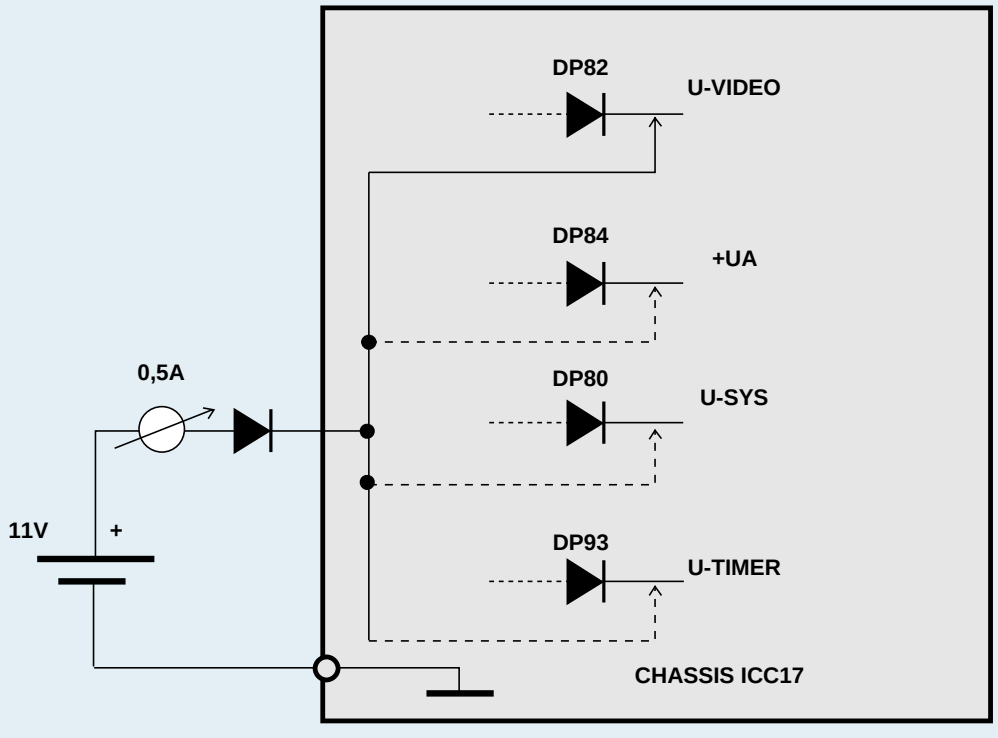

IV 01
RUTINA DE REPARACIÓN
¿8V durante puesta en marcha en Pin 23 y Pin 53 IV01?
No
Comprobar RV01, CV03 RC02, CC03 ¿Cortocircuito en una línea de alimentacion de IV01?
Sí
Problema de alimentación o de µP
Sí
5V en Pin 55 & 6,8V en Pin 19 IV01
No
Comprobar CC01, ¡CI 57 IV01 defectuoso!
Sí
¿ Transmisión de bus visible durante la puesta en marcha ?
No
Bus bloqueado o problema de µP
Sí
¿ Señal en diente de sierra en Pin 4 IV01 durante la puesta en marcha ?
No
CI no inicializado o mal Comprobar osciladores de cristal, protocolo bus
Sí
¿Pin 58 <6v & Pin 3 < 3V durante la puesta en marcha ?
No
Comprobar circuito de seguridad y señal de compensación EHT
Sí
¿IV01 defectuoso?

SECONDARY DC-VOLTAGES

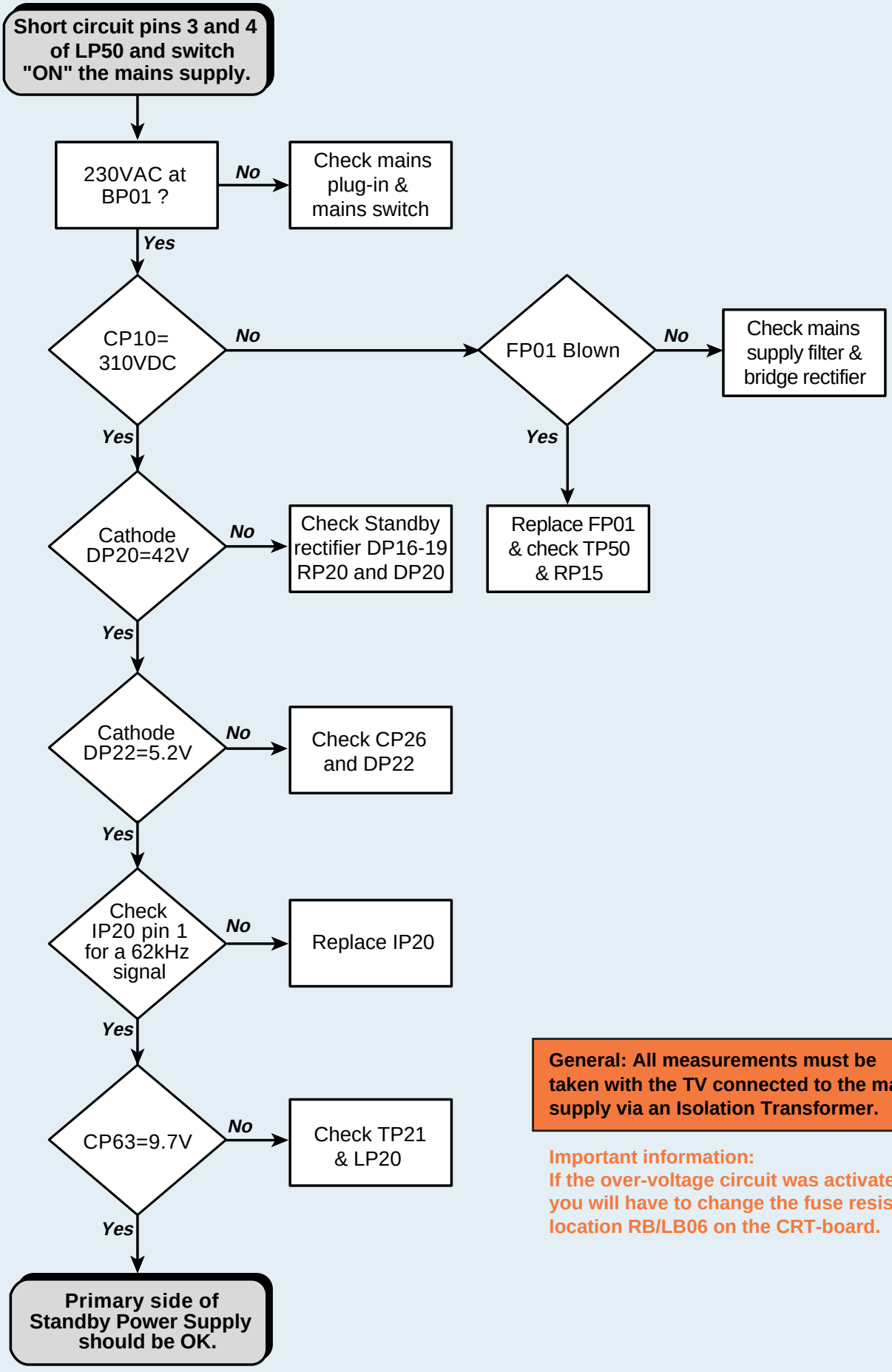
All measurements in this chapter must be done WITHOUT the mains supply connected to the TV.

Test circuit:

The external voltage source is provided by a variable DC-power supply with its output voltage set to 11V and the current limitation set to 500mA's. The negative terminal of the DC-power supply must be directly connected to the chassis secondary ground plane. The positive terminal of the DC-power supply is first connected to an ammeter and then the anode of an isolation diode. The cathode of the isolation diode is then connected to the load on the chassis as shown below. Measure the current drawn by each load tested.



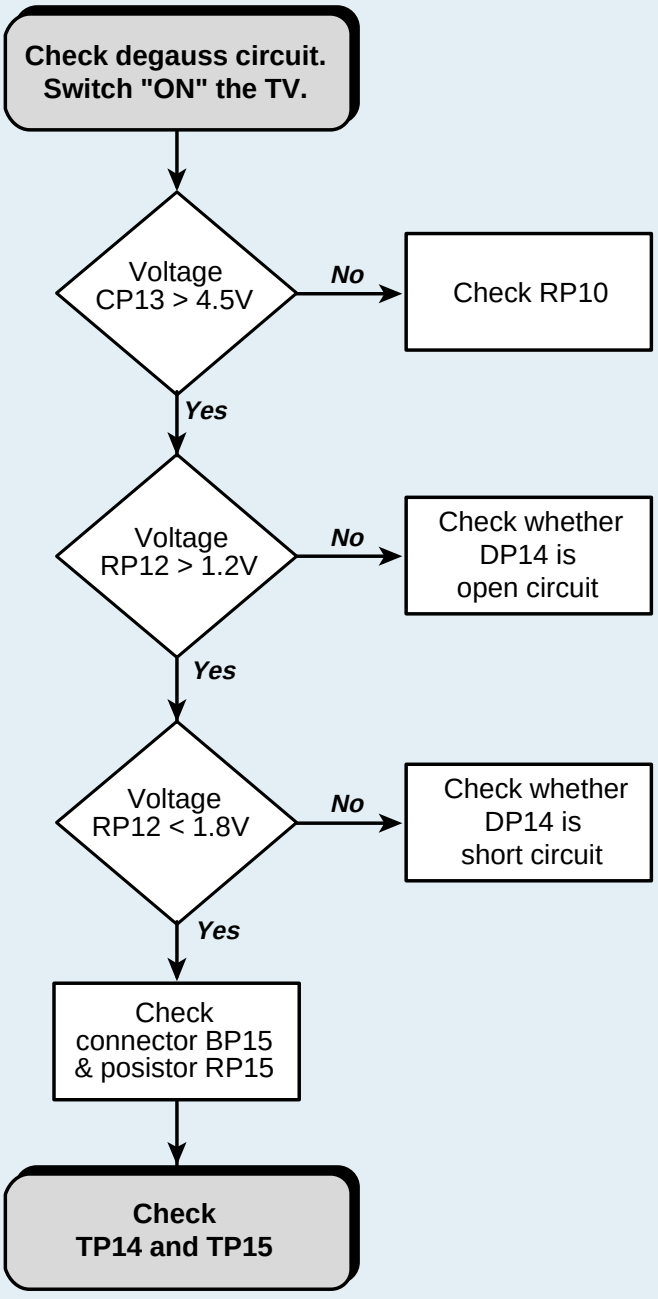
STANDBY POWER SUPPLY - PRIMARY SIDE



General: All measurements must be taken with the TV connected to the mains supply via an Isolation Transformer.

Important information:
If the over-voltage circuit was activated, you will have to change the fuse resistor at location RB/LB06 on the CRT-board.

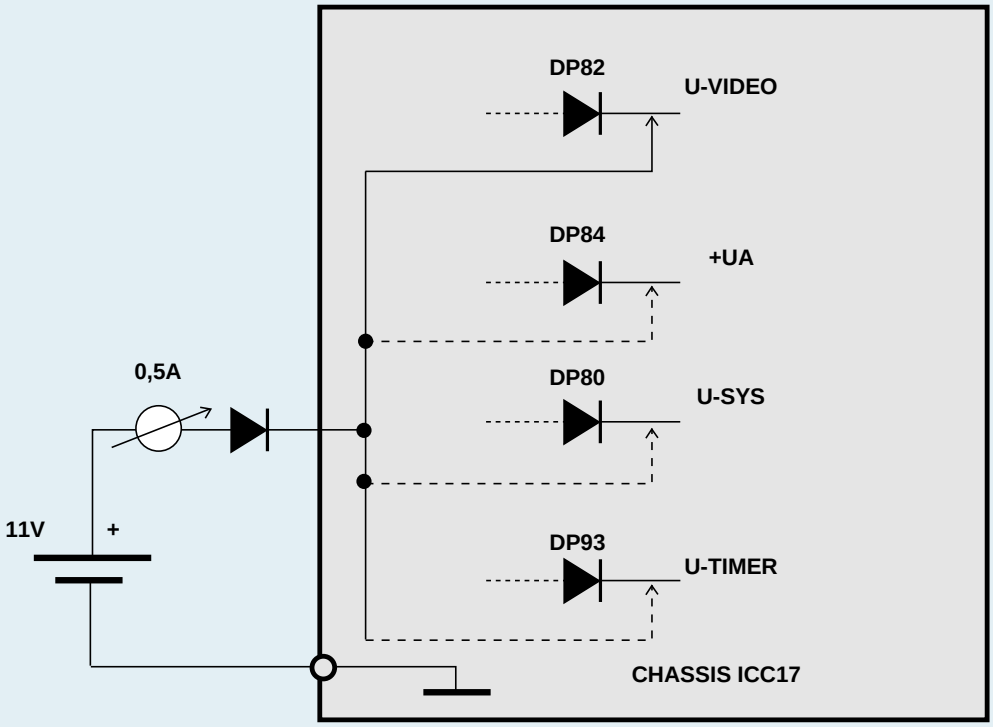
DEGAUSSING CIRCUIT



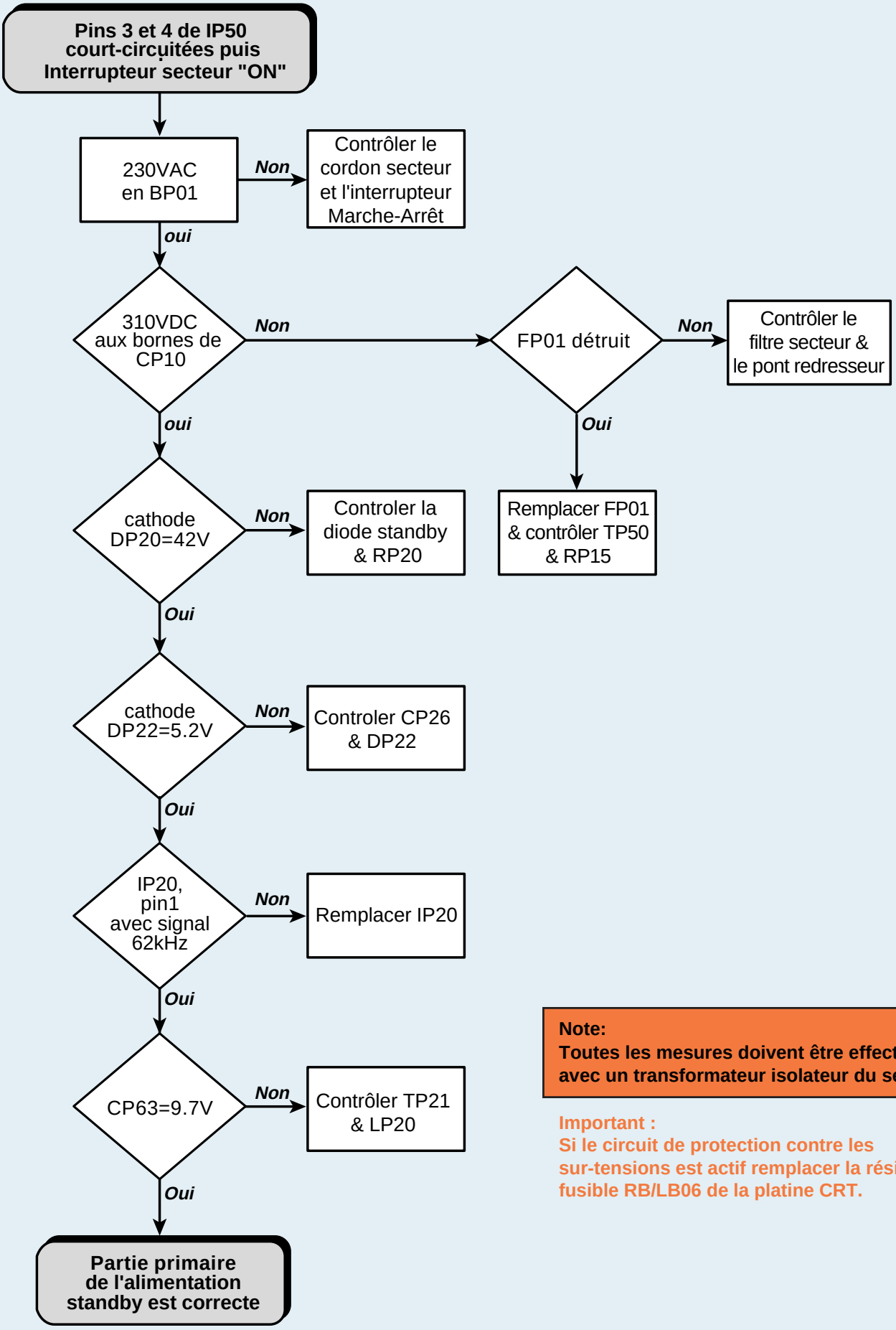
TENSIONS SECONDAIRES

Toutes les mesures de ce chapitre doivent être effectuées SANS alimentation secteur.
Utiliser une Alimentation continue externe

Circuit Test:
L'alimentation externe est une alimentation continue de 11V réglable avec un courant de limitation de 0.5A.
Le pôle - est relié à la masse secondaire du chassis.
Le pôle + de l'alimentation externe sera réunie à travers une diode, aux circuits de charge indiqués en début d'organigramme.(voir schéma ci-contre).
Le courant de charge devra être mesuré.



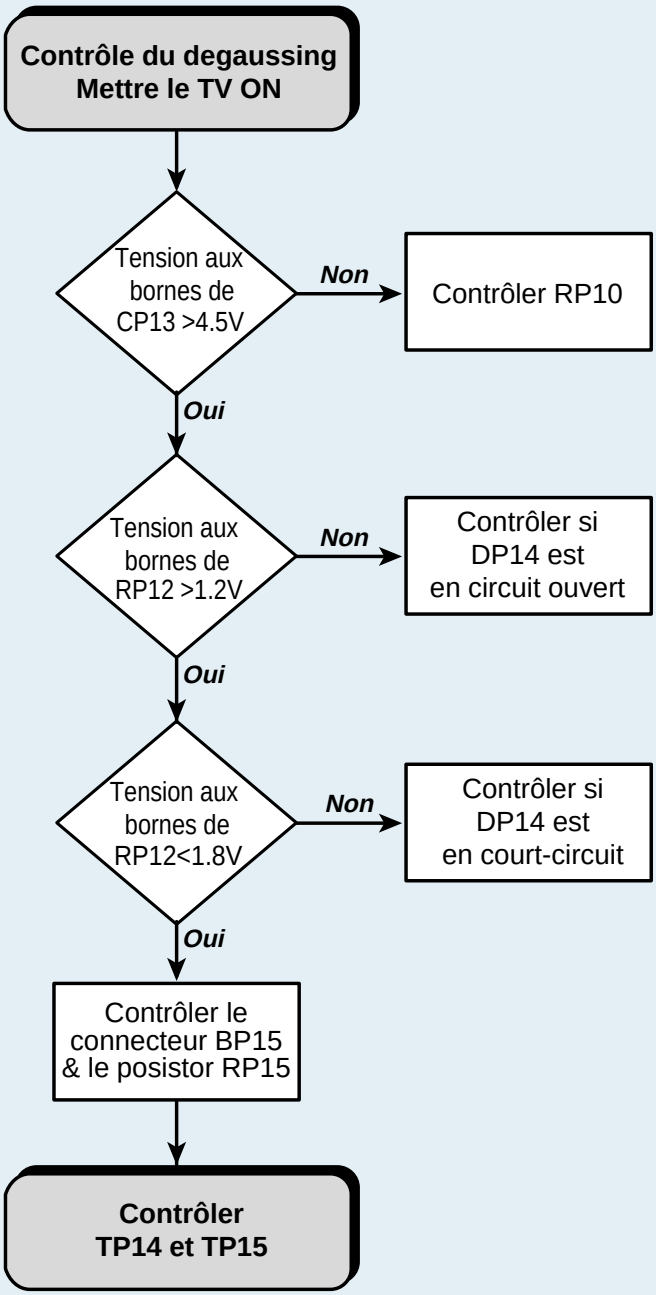
ALIMENTATION STANDBY - PARTIE PRIMAIRE



Note:
Toutes les mesures doivent être effectuées avec un transformateur isolateur du secteur

Important :
Si le circuit de protection contre les sur-tensions est actif remplacer la résistance fusible RB/LB06 de la platine CRT.

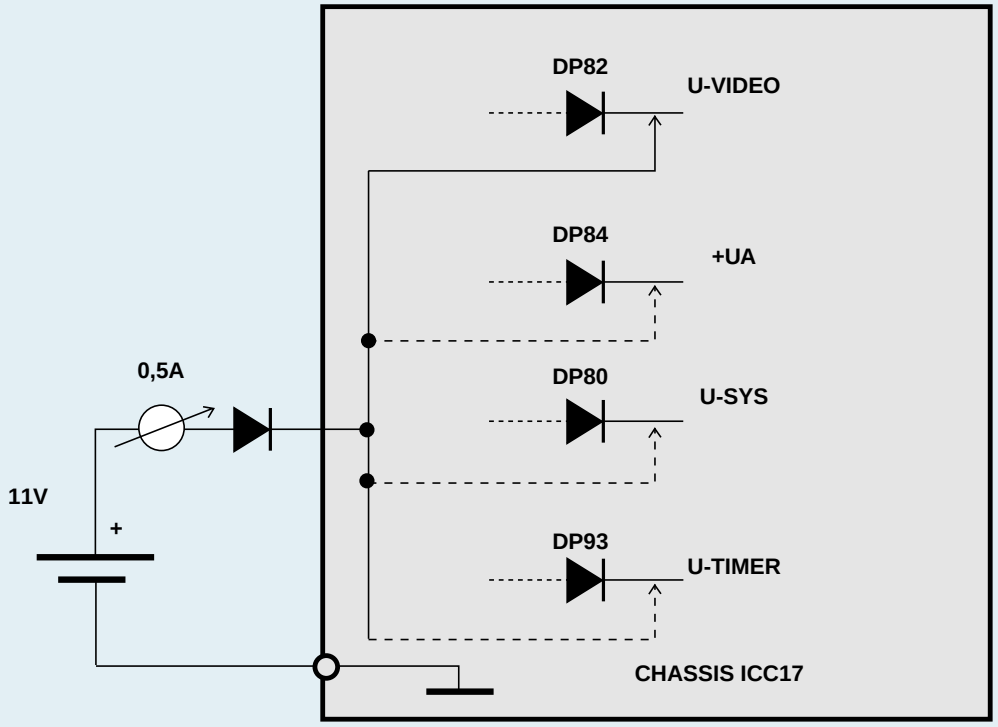
CIRCUITS DE DEGAUSSING



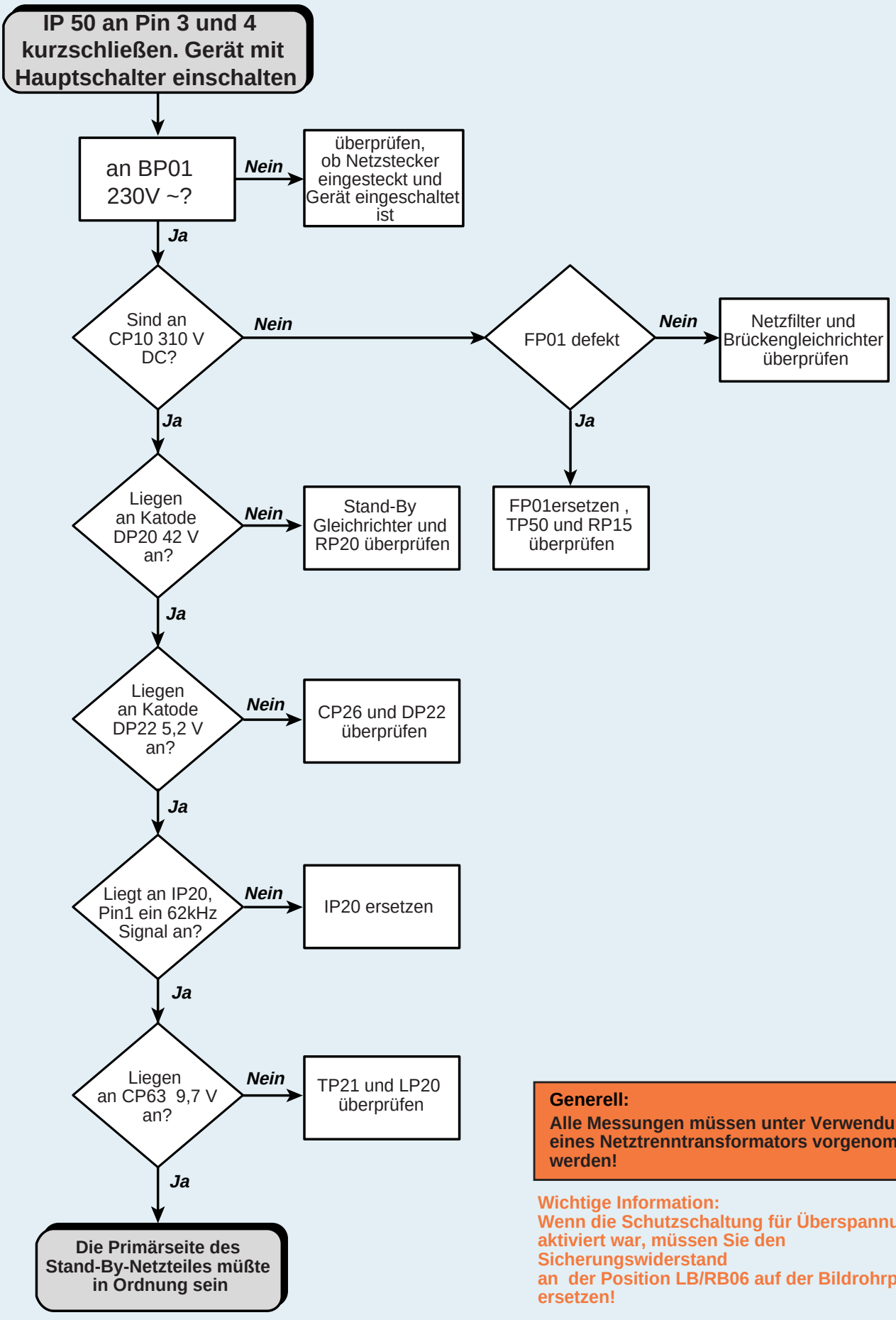
ÜBERPRÜFUNG DER SEKUNDÄRSEITIGEN GLEICHSPANNUNGEN

Alle Messungen in diesem Kapitel müssen ohne Netzspannung vorgenommen werden. Benutzen Sie dieTestschaltung.

Testschaltung:
Die externe Spannung ist an ein externes Netzteil mit einer eingestellten Spannung von 11 V und einer Strombegrenzung von 0,5 A angeschlossen
Der Minuspol der externen Spannungsquelle wird direkt mit der Masse des sekundären Netzteils verbunden! Der Pluspol der externen Spannungsquelle wird über eine Diode eingespeist, wobei die Anode dieser Diode mit dem Pluspol verbunden ist. Die Katode ist mit dem entsprechenden Einspeisepunkt auf dem Chassis verbunden..
Der Strom muß gemessen werden.



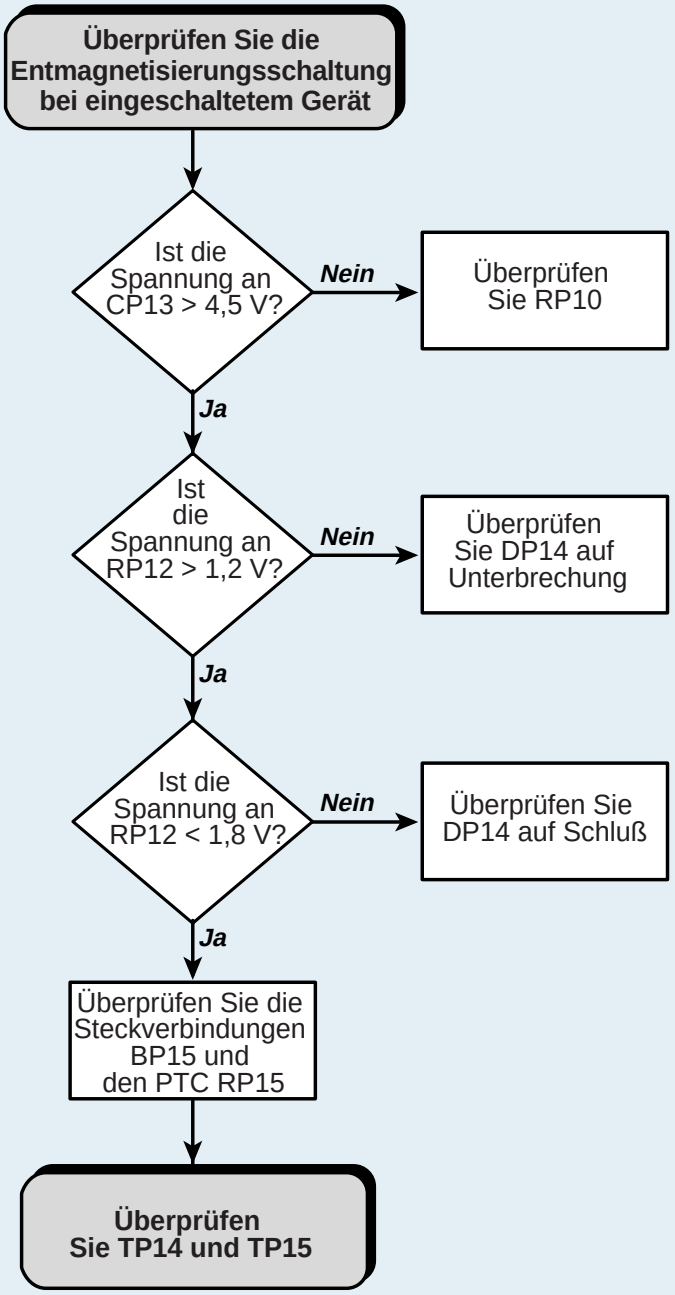
STAND-BY NETZTEIL - PRIMÄRSEITE



Generell:
Alle Messungen müssen unter Verwendung eines Netztrenntransformators vorgenommen werden!

Wichtige Information:
Wenn die Schutzschaltung für Überspannung aktiviert war, müssen Sie den Sicherungswiderstand an der Position LB/RB06 auf der Bildrohrplatte ersetzen!

ENTMAGNETISIERUNGSSCHALTUNG


Überprüfen Sie die Entmagnetisierungsschaltung bei eingeschaltetem Gerät
Ist die Spannung an CP13 > 4,5 V?
Nein
Überprüfen Sie RP10
Ja
Ist die Spannung an RP12 > 1,2 V?
Nein
Überprüfen Sie DP14 auf Unterbrechung
Ja
Ist die Spannung an RP12 < 1,8 V?
Nein
Überprüfen Sie DP14 auf Schluß
Ja
Überprüfen Sie die Steckverbindungen BP15 und den PTC RP15
Überprüfen Sie TP14 und TP15